

A SOCIOMETRIC SURVEY OF TWO URBAN SCHOOLS TO INVESTIGATE
TEACHER AND PUPIL AWARENESS OF CHILDREN'S PEER
ACCEPTANCE AND SOME POSSIBLE CORRELATES
OF HIGH SOCIOMETRIC STATUS

A Thesis
Presented to
the Department of Education
the University of Canterbury

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Ronald John Stevens
February 1965

TABLE OF CONTENTS

CHAPTER		PAGE
I.	HISTORY OF THE PROBLEM	1
II.	THE IMPORTANCE OF THE SOCIALIZATION OF THE CHILD IN THE EDUCATIVE PROCESS	6
	Introduction	6
	Development of the individual in society	11
	The school as an agent in maladjustment	15
	The relationship between maladjustment and sociometric status	17
	The development of a self-picture . . .	19
	Socialization as a practical emphasis .	22
III.	REVIEW OF THE LITERATURE	26
	The Development of Sociometry	26
	The contribution of Moreno	26
	Definition of sociometry	29
	Teacher Awareness of Pupil Popularity . .	29
	Teachers' estimation of pupil status . .	30
	Factors affecting teachers' judgment . .	33
	Correlates of High Sociometric Status . .	36
	Personality characteristics	36
	Sex differences	40
	Summary	43

CHAPTER

PAGE

	Intelligence and achievement	44
	Age	47
	Physical factors	49
	Home environment	52
	Number in family and ordinal position . . .	54
	Proximity	55
	Leadership and some related aspects	57
	Conclusion	60
IV.	INTRODUCTION TO THE EXPERIMENTAL SECTION	61
	Overview of the Problem	61
	Selection of Subjects	63
	Population studied in the first survey (1961)	63
	Population studied in the second survey	
	(1962)	64
	Administration of the Tests	65
	First survey (1961)	65
	Second survey (1962)	67
	Rapport	67
V.	THE SOCIOMETRIC TEST	69
	Construction of the Sociometric Test: Some	
	Theoretical Considerations	69
	The Sociometric Test used in this Survey . . .	71
	Scoring the Sociometric Test	75
	Results of the Sociometric Test	76

Percentages of cases in each sociometric category	76
Correlations between scores obtained on different criteria	86
Stability of Sociometric Test Results	90
Reliability coefficients by correlation of choices	90
Changes in sociometric classification after twelve months	92
VI. TEACHER AWARENESS OF PUPILS' LEVELS OF PEER ACCEPTANCE	102
Teachers' Estimation of Each Child's Sociometric Category	102
Accuracy of Teachers' Estimates for all Children Rated	103
Accuracy of Teachers' Estimates in Relation to the "Confidence of Estimate Scale"	110
Teaching Experience as a Factor in Accurate Estimation	112
A Comparison Between the Results for Men and Women Teachers	115
The Teachers' Estimation of the Popularity Rankings of Pupils	118
VII. PUPILS' AWARENESS OF PEER POPULARITY	126

CHAPTER		V PAGE
VIII.	THE RELATIONSHIP BETWEEN PUPIL BEHAVIOUR AND	
	SOCIAL STATUS	134
	The Analysis of Pupil Behaviour	134
	A Comparison Between Men Teachers' and	
	Women Teachers' Estimates on the Behaviour	
	Rating Scale	147
IX.	TRAITS ATTRIBUTED TO POPULAR AND UNPOPULAR	
	CHILDREN ON A "GUESS WHO?" TEST	160
	Form A	160
	Development of the "Guess Who?" test . . .	160
	Selection of test items (Form A)	161
	Scoring and results of the "Guess Who?"	
	test (Form A)	164
	Form B	178
	Selection of items for "Guess Who?" test	
	(Form B)	178
	Results of "Guess Who?" test (Form B) . .	180
X.	THE RELATIONSHIP BETWEEN SOME ENVIRONMENTAL	
	FACTORS AND SOCIOMETRIC STATUS	189
	Family size and sociometric status	189
	Ordinal position and sociometric status .	191
	Changes of school and sociometric status .	192
	Parent's occupation and sociometric status	194

XI.	THE RELATIONSHIP BETWEEN A CHILD'S STATUS AND ATTITUDE TOWARDS SCHOOL	197
	Selection of a rating scale	197
	Administration of the rating scale	197
	Interpretation of results	198
	Sex differences	199
	Difference between class levels	199
	Scores obtained by different sociometric categories	199
XII.	DISCUSSION, CONCLUSIONS AND IMPLICATIONS FOR THE CLASSROOM	204
	Discussion	204
	Summary and conclusions	208
	Implications for the classroom	210
BIBLIOGRAPHY		
	Books	212
	Periodicals	214
APPENDIX		
	Appendix A. Group Growth	219
	Appendix B. Test forms used in the study	220
	Appendix C. Tables related to the sociometric test	237
	Appendix D. Estimation of pupil status tables	243
	Appendix E. "Guess Who?" test scores	246
	Appendix F. Attitude towards school scale	256

LIST OF TABLES

vii

TABLE		PAGE
I.	Number of Cases Studied at School A in the First Survey (1961)	66
Ia.	Number of Cases Studied at Schools A and B in the Second Survey (1962)	66
II.	Percentage of Children in Each Sociometric Category	78
III.	Percentage of Children Rated in Each Sociometric Category Showing Range for Classes Within Each School and the School Average	79
IV.	Percentage of Boys Rated in Each Sociometric Category Showing the Range for Classes Within the School and the School Average	82
V.	Percentage of Girls Rated in Each Socio- metric Category Showing Range for Classes Within Each School and the School Average	83
VI.	Intercorrelations Between Scores Obtained on Each of the Three Sociometric Criteria (Boys)	88
VII.	Intercorrelations Between Scores Obtained on Each of the Three Sociometric Criteria (Girls)	89

TABLE

VIII.	Stability Coefficients by Pearson Product Moment on Choices Obtained on a Socio- metric Test/Retest after a Twelve Months Interval	93
IX.	Changes of Status on a Sociometric Retest After Twelve Months Interval (All Cases) . . .	95
X.	Changes in Sociometric Status after Twelve Months	97
XI.	Changes of Status on a Sociometric Retest After Twelve Months Interval (Boys)	99
XII.	Changes of Status on a Sociometric Retest After Twelve Months Interval (Girls)	100
XIII.	Totals of Teachers' Estimates of Each Child's Sociometric Category in Relation to "Confidence of Estimate" Ratings	104
XIV.	Accuracy of Teachers' Estimates of Each Child's Sociometric Category	105
XV.	Accuracy of Teachers' Estimation of Each Child's Sociometric Status: A Comparison Between Probationary Assistants and Other Teachers	114
XVI.	Totals of Teachers' Estimates of Each Child's Sociometric Category: Separate Results for Men and Women Teachers	116

XVII.	Percentage of Accuracy with Which Teachers Estimated the Five Most Popular Boys and Girls and the Ten Most Popular Boys and Girls in their own Classes	121
XVIII.	Percentage of Accuracy with which Boys Estimated the Five Most Popular Boys and Girls and the Ten Most Popular Boys and Girls in their own Classes	128
XIX.	Percentage of Accuracy with which Girls Estimated the Five Most Popular Boys and Girls and the Ten Most Popular Boys and Girls in their own Classes	131
XX.	Teachers' Assessments of All Children's Behaviour Rating Showing Percentages in Each Category	136
XXI.	Teachers' Assessments of Form I Children's Behaviour Rating Showing Percentages in Each Sociometric Category	144
XXII.	Teachers' Assessments of Standards Two to Four Children's Behaviour Rating Showing Percentages in Each Sociometric Category .	145
XXIII.	Men Teachers' Assessments of Standard Two to Four Children's Behaviour Rating Showing Percentages in Each Sociometric Category .	148

XXIV.	Men Teachers' Assessments of Form One Children's Behaviour Rating Showing Percentages in Each Sociometric Category .	151
XXV.	Women Teachers' Assessment of Standard Two to Four Children's Behaviour Rating Showing Percentages in Each Sociometric Category	154
XXVI.	Women Teachers' Assessments of Form One Children's Behaviour Rating Showing Percentages in Each Sociometric Category .	156
XXVII.	"Guess Who?" Items for Boys Which showed Consistent Trends in Relation to Socio- metric Categories	165
XXVIII.	"Guess Who?" Items for Girls Which Showed Consistent Trends in Relation to Socio- metric Categories	171
XXIX.	Mean Scores Received by Members of the Star Category on "Guess Who?" Form A . .	176
XXX.	Mean Scores Received by Members of the Neglectee Category on "Guess Who?" Form B	177
XXXI.	Characteristics of Boys in the Star Category as Shown on "Guess Who?" Test, Form B . .	182

TABLE	PAGE
XXXII. Characteristics of Boys in the Neglectee and Isolate Categories as Shown on the "Guess Who? Test, Form B"	183
XXXIII. Characteristics of Girls in the Star Cate- gory as Shown on the "Guess Who? Test, Form B"	185
XXXIV. Characteristics of Girls in the Neglectee and Isolate Categories as Shown on the "Guess Who? Test, Form B"	186
XXXV. Percentages Showing the Relationship Between Family Size and Sociometric Ratings	190
XXXVI. Percentages Showing the Relationships Between Changes of School and Socio- metric Rating	193
XXXVII. Percentages in Each Sociometric Category in Relation to Parent's Occupation	195
XXXVIII. Sex Differences on a Scale of Attitude Towards School	200
XXXIX. Differences for School Class Levels on a Scale of Attitude Towards School	201
XL. Mean Scores in Sociometric on a Scale of Attitude Towards School	202

TABLE	IN APPENDIX	PAGE
XLII.	Number of Cases in Each Sociometric Category Within Each School Class (Boys)	237
XLIII.	Number of Cases in Each Sociometric Category Within Each School Class (Girls)	238
XLIV.	Percentage of Children in Each Sociometric Category Within Each School Class	239
XLV.	Percentage of Boys in Each Sociometric Category Within Each School Class	240
XLVI.	Percentage of Girls in Each Sociometric Category Within Each School Class	241
XLVII.	Percentage of Pupils Chosen Above and Below Expected Value Using the Average Score of Three Sociometric Criteria With Five Sociometric Choices	242
XLVIII.	Teachers' Estimation of Each Child's Sociometric Status	243
XLIX.	Deviation of Teachers' Estimates from the Children's Actual Sociometric Status in Relation to the Confidence of Estimate Scale	244

TABLE

PAGE

XLIX.	"Guess Who? Test Form A". Combined Totals of all Classes: Average Number of Times each Item was Attributed to Various Sociometric Categories	246
L.	"Guess Who? Test Form B" Showing Average Number of Times Each Item was Attributed to Boys' Sociometric Categories	254
LI.	"Guess Who? Test Form B" Showing Average Number of Times Each Item was Attributed to Girls' Sociometric Categories	255

CHAPTER I

HISTORY OF THE PROBLEM

An initial interest in interpersonal relationships engendered by the meeting of large numbers of widely differing people in the course of self-employment, military training, various sporting activities, teacher training and, finally, in class teaching, was fostered by the encounter with sociometric theory and practical techniques in a course of Education at the University of Canterbury.

The application of sociometric techniques during the probationary and later years of primary school teaching proved of considerable value in the illumination of classroom social problems. Outstandingly popular pupils were usually found to experience success in group leadership and socially neglected children were encouraged to form at least a few friendships. Seating arrangements and groups for specific projects were constructed through the use of sociometric tests and cliques, which were likely to be disruptive to the total social situation of the class, were distributed. In general, the use of sociometry in the classroom was considered a practical and useful aid.

Discussions with other teachers over a period of approximately five years revealed that most were either unaware of the sociometric techniques or did not consider them

to be of sufficient value to be worth the labour involved in scoring. Only one teacher had used such tests regularly with his classes and he was enthusiastic about their value.

A feeling of antipathy was noticed amongst many teachers who were engaged in discussion about its use since most appeared to regard sociometry with some suspicion, query its validity and dismiss it as an unjustified intrusion into the child's private affairs. A brief examination of these criticisms is pertinent since it was such opposition, to a technique which had been found useful by the experimenter, which led to this topic being adopted as worthy of further study in the New Zealand situation.

The initial ground for the suspicious regard in which sociometry was held amongst practising teachers was one of cultural bias. Today, there is considerable emphasis in New Zealand upon the culture of the United States of America. Films, radio, books, magazines and, particularly, television all contribute to the spread of this culture and a conscious attempt is made to adopt many aspects of it. "American Style" houses, automobiles, conferences, barbecues, hamburger bars, clothing and innumerable other facets of every-day living are helping to shape the men, women and children of this country. Similarly in the field of education, New Zealand has followed many of the trends and practices which

have appeared in the United States. While an almost slavish acceptance is made of many parts of the American culture there is considerable resistance to other sections, and their stress upon personal relationships appears to be one of these.

In general, the American stereotype is considered to be much more outspoken about his personal and social relationships, and more permissive about the examination of them, than his New Zealand counterpart. Much of the resistance to sociometry which was encountered stems from this difference. Sociometry is a means of investigating something which is considered to be not quite legitimate research fare in this country.

The questioning of the validity of sociometry was rarely based upon a knowledge of the subject but was rather a query about the necessity for the use of such a technique. Many teachers would claim that they could predict the test attainment of their pupils in a wide variety of subjects, recognize the effects of differing home backgrounds and be prepared to assess confidently each child's adjustment and social status within the class. Reflection upon the capability of sociometry to produce valid responses was not as frequent as the dismissal of the technique as being unnecessary to an observant teacher.

The third argument, that the examination of the friend-

ships a child desires and of the manner in which he is accepted by his fellows is an unjustified breach of a child's privacy, is, perhaps, a more valid objection. While such examination may be distasteful from a prying viewpoint it could provide information of real assistance to the teacher in his efforts to help particular individuals and so be justifiable. Manipulation of the environment, so that a child is predisposed to make friendships with one section of the class rather than another is, however, also rendered practicable and it is questionable whether it is ethical for a teacher to utilize information ostensibly gathered for another purpose. Conversely, the whole of education may be considered in this light since the child is seldom likely to be aware of the attitudes, interests and values being inculcated but, while education is directed to goals held to be desirable by the society, teachers can expect parental support. For the vast majority of pupils, social adjustment is satisfactorily attained but for the benefit of the few in every class who are not so fortunate, any invasion of privacy which does take place is probably warranted.

This study has been designed to examine whether or not wider use of sociometry is desirable in New Zealand schools through the testing of the hypothesis that teachers can already, on the basis of personal experience, adequately esti-

mate a child's social status. A further positive contribution has been attempted through research into the children's own perception of peer popularity and through the production of a list of traits, which, from the child's viewpoint, correlate with high sociometric status. Some environmental factors which may correlate with social status have been selected for investigation and the relationship between status and its effect upon attitude towards school has also been examined.

It is hoped that the results of the aspects studied will enable comparisons to be made about the general applicability of overseas sociometric researches to the New Zealand educational situation.

CHAPTER II
THE IMPORTANCE OF THE SOCIALIZATION OF THE CHILD
IN THE EDUCATIVE PROCESS

Introduction

In his discussion of the ultimate aims of education, Brubacher outlines three possible standards of measurement.¹ For those to whom religion is the basis of, and meaning for, life, education is the inculcation of those values and standards of behaviour set by religious beliefs, i.e., the unattainable standard of divine perfection. A second viewpoint is that 'self-realization' is the final aim. This more ambiguous concept has been interpreted in different ways by different philosophers but may take the form of the exaltation of intellectual excellence, or the development of man as a social being - the stereotype of which will be dependent upon the philosophical basis of the society concerned. The third standard is the pragmatic approach, typified by Dewey², which holds 'growth', and the continual opportunity for further growth, as the ultimate aim.

¹Brubacher, John S. Modern Philosophies of Education. New York: McGraw-Hill Book Company, Inc. 1950. 106-112.

²Dewey, John Democracy and Education. New York: The Macmillan Company, 1916.

None of these ultimate standards has been formally adopted by educators in New Zealand. The nation has Christianity as the official religion and has a democratic form of political organization which supports the self-realization of each person, as far as it is consistent with the development of all other individuals, while, at the same time, its educational policies have been considerably influenced by the pragmatic approach and, especially, by the philosophy of Dewey.

The teacher in the classroom is required, in the absence of official direction, to formulate his own values, as long as they are within the broad philosophical limits imposed by a democratic society. His personal values will undoubtedly influence his educational aims but, as much of the difference in ultimate ends is reflected in practical situations only in the amount of emphasis placed upon various aspects of the educative process, considerable overlap might be expected in the classroom aims of teachers in spite of basic philosophical differences.

Traditionally, education, for a majority of the public, is synonymous with the development of the Three Rs, with the learning of some geographical, historical and scientific facts and with some acquaintance with art, music and manual activities, but that the emphasis may be moving away from the timetabled

subjects is reflected in Brim's statement that:-

A national opinion survey (B17) of several years ago of what is most important in education shows variation by the education of the respondent: an emphasis on character education is positively correlated with educational status, while a concern for the usual subject matter, e.g. arithmetic, shows an inverse relation. Age comparisons show younger respondents (twenty-one to thirty-nine years) to stress social adjustment much more than do persons of forty or older, suggesting the validity of recent arguments that our conception of the desirable man may be changing toward one whose primary virtue is to get along with others. ³

Academic scholarship is still highly valued in our society, probably to a greater extent than in any previous culture, and yet the major international conflicts of this century and the cataclysmic consequences of further strife are forcing ordinary people into an awareness of the necessity to foster good relationships amongst all people - from the international level down to interpersonal contacts. Mass media and rapid communications also aid a realization of the importance of social issues and the viewing, at almost first hand, of the social problems of other people should enable a more objective analysis of those problems which more directly concern us to be made.

³ Brim, Orville G. Sociology and the Field of Education. Russell Sage Foundation, New York, 1958. p19

The pitiless spotlight directed upon the lives of the internationally famous also tends to emphasise the importance of social adjustment for every person regardless of his or her attainments. National leaders are increasingly displayed in situations which reflect the human qualities of sympathy, tolerance and familial affection while biography often reveals the sacrifices rendered by those who separate themselves from social interactions for the fulfilment of their aims. Albert Einstein has been rated, by many, as the most brilliant theoretical physicist since Newton. His capacity to concentrate upon scientific problems to the exclusion of all else led not only to the development of his theory of relativity but also to the breakdown of his first marriage. Academic concentration, as well as superior ability, increasingly removed him from social contact with his fellow beings while lack of response to his appeals for world peace, the failure of thirty-five years work to ground physics upon a field theory, and his lack of congenial companionship finally left Einstein embittered and lonely. The realization of his isolation is reflected in his soliloquy after the mental breakdown of his son Edward.

How strange is the lot of us mortals. Each of us is here for a brief sojourn; for what purpose we know not, though we sometimes think we sense it. But without deeper reflection, we know from daily life that we exist for other people - first of all for those upon whose smiles and well-being our own happiness is

wholly dependent ...⁴

Such contribution - but at such personal cost.

Few scholars have the ability to advance human progress substantially and while academic educational opportunity must be preserved for these and others of lesser attainment, more general emphasis upon the socializing activity of education might be seen as a fundamental requirement for all pupils.

The changes in our schools; the declining emphasis on advancement by academic examination; revision of curricula and increasing pupil-participation all show a movement towards the socialization of the child but more definite guidance is necessary for the practising teacher about the aims, the effects and the techniques of socialization before such an aim can be effectively fulfilled.

Berrien and Bash conclude that:

... the process of education in any culture must include tutelage in the appropriate responses to the codes of the groups making up that culture. These responses we call social skills ... The hallmark of this skill is quick and ready adaptability to social situations that are never the same. Hence such skills must depend upon broad realistic observations, taking into account similarities and nuances which an individual meets from situation to situation.⁵

⁴ Michelmore, P. Einstein: Profile of the Man. London: Frederick Muller Limited, 1963. p.134.

⁵ Berrien, F.K. and Bash, Wendell H. New York: Human Relations: Comments and Cases, Harper and Brothers, 1957. p142.

Freedom of action, which has often been presented in the permissive educational policy of New Zealand schools, is not enough. The teacher must make a conscious effort to provide the environment and opportunities for social interaction which will elicit the desired skills for those who are failing in social adjustment under present conditions as well as for those who are, somewhat fortuitously, succeeding.

Development of the Individual in Society

If socialization is desirable as a facet of general educational emphasis, it is of much more specific value when the personal development of the individual in society is considered. Bloom⁶ notes that some of the common factors which occur in various theories of personality development assume that such development is very rapid in the early years of infancy and childhood, and that there is a possibility of marked change during adolescence but also that there is little likelihood of anything but a slight change once adulthood and maturity have been reached.

Bowlby⁷ and others in similar research projects have shown the effects upon behaviour of maternal and social deprivation

⁶Bloom, Benjamin S., Stability and Change in Human Characteristics, New York: John Wiley & Sons, Inc., 1964. p132-133.

⁷Bowlby, John, Maternal Care and Mental Health. New York: Columbia University Press, 1951.

during the child's earliest months while investigations such as Landreth⁸ records, clearly show that a vast amount of social learning has already been achieved by the time a child enters school, where his new situation is neatly summed up by Rivlin⁹:

The classroom is an important source of maladjustment. There, the child first comes in contact with definite tasks the accomplishment of which is measured in objective terms. He is no longer a member of a small family which considers his needs to be of paramount importance; he must readjust himself to being treated as one of a larger group. Forced to compete with other children of greater and lesser ability he must learn to face both defeat and victory in a socially approved manner.

That the child at school will continue to use the behaviour patterns established in his preschool years is noted by Peck and Havighurst¹⁰, while research by Piaget¹¹, and Durkin¹² and

⁸ Landreth, Catherine. The Psychology of Early Childhood. New York, Alfred A. Knopf, 1958.

⁹ Rivlin, Harry N. Educating for Adjustment. New York: D. Appleton-Century Company, Inc., 1936. p.10.

¹⁰ Peck, Robert F. and Havighurst, Robert J., The Psychology of Character Development, New York: John Wiley & Sons, Inc., 1960.

¹¹ Piaget, Jean, The Moral Judgment of the Child, Routledge and Kegan Paul Ltd., London, 1932.

¹² Durkin, Delores, Children's Concept of Justice: A Further Comparison with Piaget Data, J. educ. Res., Vol.52, No.7, March 1959.

Harrower¹³ indicates that each person can be expected to pass through a series of stages of moral development which will affect his social behaviour. The teacher's task during the early years of schooling must be to help each individual to adjust to the expectations and limitations he will encounter in his early dealings with peers in an ordered environment, while at the same time recognizing the effects of differing backgrounds and stage of development upon overt behaviour.

How many children adjust satisfactorily during their school years depends upon the criteria for judging but some measure could be obtained by noting the percentages of children who exhibit neurotic characteristics, who are behaviour problems, who frequently experience peer conflicts or who become delinquent.¹⁴ This, however, would be a negative approach since the improvement of adjustment for all should be the aim rather than mere remedial

¹³ Harrower, M.R., Social Status and the Moral Development of the Child, Brit. J. educ. Psychol., Vol. IV, Pt. I Feb. 1934.

¹⁴ Problems in Education XI. 1955, UNESCO. Quoted from Wheeler, Dame Olive, Phillips, William and Spillane Joseph P., Mental Health and Education, University of London Press, Ltd., 1961.

"According to a UNESCO report on Education and Mental Health, the proportion of seriously maladjusted children of school age is probably about five per cent; but for those for whom some treatment should be available is estimated to be as high as twenty to twenty-five per cent."

action for social failures. This aim is basic to the concept of mental health in the schools developed by Priestley who noted that during the transmission of attitudes, values, skills and knowledge, the child must develop certain social understandings. He considered that there were three areas of school behaviour; (a) that which is required of the child, (b) that which is not tolerated and, (c) an ill-defined middle area in which the child's choice was operative, and suggested that

... the degree to which an education system can promote good mental health in children depends very much on how effectively it equips children to do the required things, inhibit the banned things, and cope with the choices in the area in between. We can think of these three things as being the broad mental health aims of a school system. ¹⁵

It is largely in the middle area that the nuances of social adjustment can become apparent but it is in this area also that lack of direction may precipitate the shelving of problems because they are only partially formulated. Havighurst¹⁶ has outlined a series of 'developmental tasks' which may provide

¹⁵ Priestley, Robert R., Mental Health in Education, In P.J. Lawrence (ed.) Mental Health and the Community, Canterbury Mental Health Council, 1963. pp. 209-240

¹⁶ Havighurst, Robert J., Human Development and Education, New York: Longmans, Green and Co., 1953.

a framework of reference for teachers to aid in the evaluation of their character development programmes. However, although these classifications might also provide an aid to the interpretation of children's behaviour the requisite observation would consume more time than would be found economic in the ordinary school. It is at this point that sociometry becomes relevant to the needs of the classroom teacher, since it provides an analysis of the social status of children on the basis of certain criteria through the use of a simple technique which requires approximately ten minutes of class time and, if a socio-matrix is used, somewhat less than an hour to score and rank pupils.

The School as an Agent in Maladjustment

The extent to which the school is the cause of individual maladjustment and unsatisfactory behaviour is interpreted in different ways by different researchers. Winder and Rau¹⁷ found that pre-adolescent boys who had experienced relatively severe frustration in their interactions with parents exhibited a diverse and intense set of maladaptive behaviours which included

¹⁷ Winder, C.L., and Rau, Lucy, Parental Attitudes Associated with Social Deviance in PreAdolescent Boys, J. abnorm. and soc. Psychol., 1962, Vol.64, No.6. p.422

hostile aggression, overdemanding and inappropriate bids for attention, withdrawal from friendly interaction with peers and manifestations of distress through frequent crying. Here, the cause of many behaviour characteristics seen at school has been placed squarely upon the parents.

The other extreme is represented by Burt and Howard¹⁸ who, in an analysis of the causes of maladjustment amongst children wrote,

The evidence gathered in this way leaves little doubt that in many cases the main, if not the sole, cause of maladjustment arises out of current conditions in the child's school.

Probably the Report of the Committee on Maladjusted Children¹⁹ was more accurate with its moderate view that while the school was seldom the direct or major cause of maladjustment it could often be a contributing factor and so there seems to be sufficient evidence to indicate a causal relationship with the schools which should be prepared to nullify or rectify their effects if possible.

¹⁸ Burt and Howard, British Institute of Psychology: Statistical Section. Vol.V. Quoted from Wheeler, O., Phillips, W., and Spillane, J.P., Mental Health and Education, London: University of London Press Ltd., 1961.

Burt, Cyril and Howard, Margaret, The Nature and Causes of Maladjustment Among Children of School Age, B.J. of Psych, Statistical Section, 1952, Vol.5. pp.39 - 59

¹⁹ Report of the Committee on Maladjusted Children. 1955. H.M.S.O. Quoted from Wheeler, Phillips and Spillane, op.cit.

The Relationship Between Maladjustment and Sociometric Status

Throughout this discussion it has been assumed that sociometry can be of assistance in the classroom because of an ability to identify those children who are in need of assistance with problems involving their adjustment to their educational situation and to their peers. 'Maladjustment' has been interpreted as an inability to develop satisfactory personal emotional characteristics or harmonious social relationships - the two being seen as interdependent.

Thorpe, in a study directly related to this relationship between sociometric status and adjustment, concluded that,

... those high in Sociometric status occupied positions at the normal end of the neuroticism continuum and/or were extremely extraverted. Those low in Sociometric status would fall at the neurotic end of the neuroticism continuum and/or would be extremely introverted. 20

His finding that teachers' assessments of adjustment bore no relationship to the assessments of neuroticism obtained by the objective test battery also indicates the need for some means of identifying such pupils which is both economic and sufficiently uninvolved for general use.

²⁰ Thorpe, J.G., The Value of Teachers' Ratings of the Adjustment of their Pupils. Brit. J. educ. Psychol., Vol.XXIX, 1959, p.212

Slavson's²¹ finding that a common factor with patients needing group psychotherapy was their rejection by parents, school or play companions supports Thorpe's conclusion while further evidence is suggested by Dentler and Mackler²² who, in research upon institutionalised, retarded children found that "social status is associated progressively with degree of individual compliance with institutional norms".

That there is a relationship between the results obtained on a sociometric test and a child's adjustment has been indicated even though the extent of connection has not been established. This, however, might be considered sufficient since what is needed in the classroom is not a clinical test of proven diagnostic or prognostic reliability but merely a means of identifying the children who are widely different from their peers. Social acceptance may be only one possible variable but since it is easily measured it seems a reasonable area for the teacher to investigate himself. Extremes of deviant behaviour

²¹ Slavson, S.R. Group Psychotherapy. Scientific American: Readings in Psychology, California, W.H. Freeman and Company, San Francisco, 1949.

²² Dentler, R.A. and Mackler, E., Effects on Sociometric Status of Institutional Pressure to Adjust Among Retarded Children. Brit. J. soc. clin. Psychol. (1963) p.89

can still of course, be referred to the psychological services available and the use of sociometry is not seen, in any way, as replacing these or usurping their function but is rather a means of selecting the socially unacceptable for further consideration.

The Development of a Self-Picture

An important aspect of the continuing socialization of the child is the development of a satisfactory Self-Picture through social relationships. Staines tested the concept of the Self-Picture as being a learned structure which is largely built up from the reactions and comments of other people and found that "good and poor adjustment are linked with the goals and methods of the typical classroom".²³ If this conception is an accurate one then its implication for teachers is obvious. From the earliest stages, the school, if it is to avoid the deleterious effects attributed to it, must seek to order children's relationships so that each child builds a Self-Picture which enables him to interact freely from a base of psychological security. For the upper classes in the primary school the problem is rather one of reinforcing the concepts held by children who have built up adequate Self-Pictures and of

²³Staines, J.W. The Self-Picture in the Classroom, Brit. J. educ. Psychol., Vol. XXVIII, June 1958, Pt.II, p.109

reorienting those who have failed to do so.

That an inadequate Self-Picture may cause a child to be hesitant about the development of peer contacts is implied in the finding by Sanders²⁴ that there was a relationship between feelings of mental insecurity, which were closely bound up with feelings of social undervaluation, and social maladjustment. This illustrates the need for a positive approach to school mental health rather than a remedial one, since inadequate Self-Pictures give rise to responses which will inhibit later development and the continual revision of the Self-Picture owing to increasingly complex social situations and expectations necessitates attention not only to the maladjusted but also to the normal child.

For continuing optimal adjustment the Self-Picture must be realistic as well as favourable. The assumption that only the child of low sociometric status needs the assistance of the teacher to continue developing his relationships is not necessarily consistent with this requirement. Young and Cooper noted that those at the other extreme might also profit from variations in their social acceptability.

²⁴Sanders, C., Insecurity and Social Maladjustment in Children. Brit. J. educ. Psychol., 1948, Vol. XVIII

There is a distinct possibility that too much popularity is as harmful to the individual as too little popularity. Social adjustment of any kind which is too comfortable may be harmful. It may be that teachers should make every child feel the security of some popularity and also the insecurity of some social rejection.²⁵

A realistic Self-Picture should include a recognition of the individual's fallibility and it is part of the function of the school to provide the experience which will force such a realization. Success and failure, whether induced or actual, can be balanced within the classroom as long as some indication of the likely inner state of the child is obtained. Continuing success, unmixed with failure, is likely to produce an unrealistic Self-Picture with concomitant unrealistic levels of aspiration and methods of response inappropriate to sterner conditions. Priestley²⁶ cites a case of this type where of twenty children of above 115 I.Q. level, from an overpermissive school, only two were successful in later life and six were actually delinquent in spite of other favourable background factors.

It would appear that, to be effective, any programme aimed at the development of the child's social relationships

²⁵Young, L.L. and Cooper, D.H., Some Factors Associated with Popularity. J. educ. Psychol., Vol.35, Dec. 1944, p.519

²⁶Priestley, Robert R. Quoted from Lawrence, P.J. (Ed.) op. cit. p.214

should be based not merely upon a conforming 'good behaviour in class' goal but upon the extension of opportunity to further social contacts, in positions of both leadership and followership, in as many widely differentiated situations as possible.

Socialization as a Practical Emphasis

While, in view of the evidence presented, it may be accepted as a reasonable requirement of the primary school to make some planned contribution to the social development of the child, a realistic assessment must also be made of the amount of emphasis which can economically be placed upon such development.

Chapin and Conway²⁷ outline what is probably the traditional view of the socializing function of 'the lower levels of the educational hierarchy' as being the drilling of the conventional mechanisms of communication which can then be used to interpret social relationships through literature, science and mathematics while further 'social insight' is developed through studies of cultural diversities revealed in 'foreign, religious, occupational and other groupings'. This arid conception of social relationships would provide an inadequate base for a programme of action envisaged in the light of the research

²⁷ Chapin, Stuart F. and Conway, Margaret I., *The Social Group in Education, 35th Yearbook, N.S.S.E.*, Chicago. University of Chicago Press, 1936.

cited as it represents only a study of such relationships instead of the practise of them in the situation in which the child currently exists.

A much more positive approach is adopted by Dobbs who saw the need for teachers to emphasize their understanding of the children's problems to the children themselves, and to provide a form of security through an attitude of loving care. This teacher/pupil relationship he considered to be "one of society's ablest weapons against the encroachment of delinquency".²⁸ While accepting that Dobbs's approach is infinitely preferable to that outlined by Chapin and Conway it appears unrealistic in view of class size and the pressure upon the teacher's time in the schools of today. However, since it is the peer group which will form the major informal socializing agent in the middle and upper school classes, concentration upon the development of appropriate skills and attitudes through interpersonal and intergroup contacts seems to provide a practical compromise. Charting of the degree of social development is possible through the use of sociometric techniques and manipulation of the environment should enable the teacher to

²⁸Dobbs, Harrison Allen, The Classroom Teacher and Delinquency Prevention, The Elementary School Journal, Vol.L, No.7, March 1950, p.380.

foster the facets of behaviour considered desirable.

Socialization through the use of group approaches to definite problems is the basic concept underlying a work by Lifton²⁹ who noted that "there are some peculiar growth experiences available to groups that are not present in a one-to-one relationship". An extreme emphasis upon personality development through working-groups encroaches upon the more specialized field of group-psychotherapy but a 'middle of the road' approach should make many of the techniques suggested by Lifton appropriate for use in the ordinary classroom. The characteristics which he lists as being typical of mature groups (Appendix A) would be entirely acceptable as aims for a personality development programme in the primary school since, subject content and religious values apart, they appear to cover a definition of 'education' in its widest sense. Socialization here, is seen not merely as a by-product but as an integral part of formal schooling.

That increased efficiency follows a greater emphasis upon interpersonal relations is a common finding and is further supported in the research by Staines who highlighted one of the

²⁹Lifton, Walter M., Working With Groups. New York: John Wiley & Sons, Inc., 1962.

fears of subject-content centred educators, after reviewing his test results, in the statement:

If it is objected that the teacher cannot spend his time teaching for an improved Self-Picture and better adjustment because of examination pressure, here is some evidence that at least equally good academic results may be got while improving adjustment. 30

From philosophical, psychological and educational viewpoints, the socialization of the child assumes a status of paramount importance. This study is intended to alert teachers to the need for the use of a more objective form of assessment of the child's social relationships than unaided observation and to further the study of personal traits which reflect the standards used by the child's peers in determining social acceptability. Increased attention to these two facets of the problem could make a practical contribution to the pupil/pupil and pupil/teacher relationships within our New Zealand schools.

³⁰ Staines, J.W. op. cit. p.110

CHAPTER III

REVIEW OF THE LITERATURE

I. THE DEVELOPMENT OF SOCIOMETRY

The Contribution of Moreno

As its creator, guide and monitor from its conception to the present day, a discussion of sociometry would be incomplete without a brief review of the contribution of J.L. Moreno. In the Preludes to the 1953 edition of his basic text on sociometry, "Who Shall Survive?", Moreno outlines his personal reaction against Marxism/Leninism on one hand and the psychoanalytic movement on the other. Both were seen as rejecting religion and as disavowing the idea of a community based upon spontaneous love. Moreno, however, embraced the concept of religion itself in spite of "the fact that Christianity, Buddhism, Judaism and other religions of the past have had limited success"¹ and sought to base it upon three hypotheses. The first was that there was a spontaneity-creativity acting as a propelling force in human progress; the second, that one should have faith in the intentions of his fellow-men - that love and mutual sharing is a powerful and indispensable working principle in group life; and

¹ Moreno, J.L. Who Shall Survive? New York: Beacon House Inc., Beacon, 1953. p.XV.

the third, that a 'superdynamic community' could be brought to realization through newer techniques.

In his philosophical approach, Moreno reflects somewhat unseavoury messianic tendencies - he equates his position to that of a 'scientific Christ', refers to "Who Shall Survive?" as 'my God book', and modestly emphasizes that all his early works were anonymous 'the true state of genius' - and he develops the concept of a social revolution based upon sociometric techniques.

While the philosophical opinions and the personal viewpoint of the man may be unacceptable this does not invalidate his technical contributions. As Moreno himself, somewhat bitterly, writes,

... it is these techniques which have made sociometry famous and which have been universally accepted, whereas its underlying philosophy of life has been relegated to the dark corners of library shelves or entirely pushed aside. ²

The techniques mentioned included the sociometric 'test' itself, i.e. the measurement of relationships through the analysis of interpersonal choices, the sociogram as a method of depicting results, psychodrama which allowed the 'working out' of private problems in a theatrical setting, and the closely related sociodrama which dealt with intergroup and group role

² Moreno, Ibid. p.XV.

problems rather than those directly concerned with an individual. The role test and roleplaying, Moreno saw as providing a 'cultural age' through measuring the complexity of roles available to a person in the same way as an intelligence test provides a mental age. His other major technical contribution was the introduction of group psychotherapy which considered not only the problem of the disturbed individual but also the problem of the causes through group contacts.

Although Moreno had developed sociometry through the study of the settlement of Austrian war-refugees near Vienna between 1915 and 1918 and had crystalized many of his techniques before his arrival in the United States of America in 1925, he dates its official recognition from its acceptance at a convention of the Medical Society of the State of New York in 1933. Wider recognition might be dated from the appearance of "Who Shall Survive?" in 1934 and progress is apparent in the establishment of Sociometry, a Journal of Interpersonal Relations in 1938 and in the opening of the Sociometric Institute and the New York Theatre of Psychodrama in 1942. That sociometry has been much slower in winning acceptance in New Zealand is indicated by the fact that university libraries here did not begin to subscribe to the journal Sociometry until

several years after it was first published. *

Definition of Sociometry

Drever presents a convenient definition of sociometry as,

a development of the social sciences, which is a school of thought rather than a distinct branch, stressing the study of the dynamic inter-relationships of individuals within a social group, and employing to a large extent spatial or geographical analogies and methods of representation. ³

Throughout this study, no attempt has been made to depict relationships through spatial representation, i.e. the construction of sociograms. A more normative approach has been adopted since the object is to study the perception of social relationships, by both teachers and pupils, and to attempt to identify some of the causal factors of popularity. The methods used to elicit sociometric information will be presented in the description of the tests used in this study.

II. TEACHER AWARENESS OF PUPIL POPULARITY

Some research findings will be included in the discussion of test results to enable direct comparison but a more complete

* A detailed account of the growth of sociometry as a school of thought is contained in an article by Jiri Nehnevajsa, Sociometry: Decades of Growth, In Moreno, J.L. (Ed.) A Sociometry Reader, The Free Press of Glencoe, Illinois, 1960. pp. 707 - 753.

³ Drever, James, A Dictionary of Psychology. Middlesex: Penguin Books, Harmondsworth, 1952. p.270

review of relevant research is presented here.

Teachers' Estimation of Pupil Status

The degree to which the teachers, unaided by the use of sociometric techniques, can estimate the sociometric status of their pupils was first discussed by Moreno who tested classes ranging from the kindergarten to the Eighth-Grade. Results for the grades, of approximately the same ages as the children used in this study, showed that of the Third-Grade 50 per cent were accurately assessed, 37.5 per cent of the Fourth-Grade and 30 per cent of both the Fifth and Sixth-Grades. He also found that,

In 48 per cent of the instances the teachers' judgements coincided with the findings through the sociometric test in respect to the two most chosen boys and girls; in 38 per cent of the instances in respect to the two least chosen boys and girls in her classroom. ⁴

Direct comparison between these results and those found in this study is not possible since Moreno required the teachers to rate only the two most chosen and the two least chosen boys and girls. However a more accurate comparison can be made with a study reported by Gronlund and performed by Bonney⁵

⁴Moreno, op. cit. p.133

⁵Bonney, Merl E., The Constancy of Sociometric Scores and their Relationship to Teacher Judgements of Social Success, and to Personality Self-Ratings, Sociometry, 6 (November, 1943) Quoted from Moreno, J.L. (Ed) The Sociometry Reader, Illinois: The Free Press of Glencoe, 1960.

who asked teachers of Fifth-Grade classes to place the children in five categories. When this grouping was compared with the sociometric results it was found that,

approximately ninety per cent of the children were placed by the teachers, either in the same quintile, or only one removed from that in which they were placed by pupil choices.

Only three teachers participated in this study but further research was done on high school students by the same investigator. In this study, Bonney asked teachers to classify their children into three groups. Those pupils whom the teacher considered to have received three or more choices were to be rated in the 'high' group, the 'middle' group were those receiving one or two choices, and the 'low' group were those without choices. An 'unable to judge' category was also included to be used if the teacher did not know the child well enough. The results presented were inconclusive. Teachers were 'unable to judge' approximately 44 per cent of all pupils and of the remainder, accuracy percentages of only 45 per cent for the 'high' and 'middle' groups were obtained and 28 per cent for the 'low' group. The major interest in this study is afforded by the unusually high percentage of children which the teachers were unable to rate.

Newstetter, Feldstein and Newcomb⁶ studied the ratings of six counsellors who assessed thirty-four boys on a seven-point scale. Comparisons with a sociometric test gave a mean coefficient of $.756 \pm .20$ while the counsellors' ratings intercorrelated to give a reliability of $.945 \pm .01$.

Probably the most exhaustive examination of this subject is that done by Gronlund who administered sociometric tests, using seating, play and work criteria, to forty Sixth-Grade classes - a total of 1258 pupils. Ranking lists were produced by the teachers for each criterion. Children were ranked from the extremes first, working towards the average, and separate assessments were made for boys and girls.

Gronlund's results showed that:

The mean accuracy of the teachers' judgments for boys on the criteria of work companion, play companion, and seating companion is .593, .569, and .614, respectively. The mean accuracy of the teachers' judgments for girls on the same three criteria is .640, .531, and .642, respectively. The last column on the right presents the average accuracy of all of the judgments of sociometric status for each teacher. An examination of these co-efficients will reveal that they vary from .268 to .838 with a mean of .595. Apparently teachers differ rather widely in their ability to make such judgments. 7

⁶ Newstetter, W.I., Feldstein, M.J. and Newcomb, T.M., Group Adjustment: A Study in Experimental Sociology, Cleveland: School of Applied Social Sciences, Western Reserve University, 1938. In Moreno (Ed) 1960, Ibid.

⁷ Gronlund, Norman E., The Accuracy of Teachers' Judgments Concerning the Sociometric Status of Sixth-Grade Pupils. In Moreno, J.L., The Sociometry Reader, Illinois. The Free Press of Glencoe, 1960. p.609.

In another study, Gronlund accompanied by Whitney⁸ compared the ratings of elementary school teachers on pupils' sociometric status and their intelligence level. a correlation-
al accuracy of .73 was obtained in estimating intelligence level and of .70 in estimating sociometric status. Their conclusion, that teachers should no more rely solely upon their judgment in the field of social relationships than they do in the evaluation of scholastic aptitude, seems an entirely reasonable one.

The various studies presented show that teachers can estimate the sociometric status of their pupils with only moderate accuracy and so it is assumed that if a more precise assessment of social status is required, the use of some objective technique is necessary.

Factors Affecting Teachers' Judgment

Teacher's Sex. No study was found which compared the sex of the rating teacher with accuracy of judgment since it appears to be assumed that nearly all teachers of primary school grades are women.

Pupil's Sex. While many studies have indicated that there are widely differing characteristics of behaviour in pupils for

⁸ Gronlund, N.E. and Whitney, A.P., The Relation Between Teachers' Judgments of Pupils' Sociometric Status and Intelligence, Elementary School Journal, 1958, V

each sex, the study by Gronlund (1960) was the only one noted which related this factor to teacher judgment. He found that there was no difference in the accuracy of teachers' judgments of the sociometric status of boys and girls. In a previous reporting of this same study, however, Gronlund had concluded that:

There is a significant difference between the sociometric status of those pupils the teachers most prefer and those pupils the teachers least prefer. This difference is in the direction of a higher sociometric status by those pupils in the preferred group. 4. There is no significant difference between the sociometric status of boys and the sociometric status of girls most preferred by the teachers. There is, likewise, no significant difference between the sociometric status of boys and the sociometric status of girls least preferred by the teachers. 9

These results, taken in conjunction with that discussed above, show that the teachers' preference for having a child in the class is not related to accuracy of judgment but they also suggest that both teachers and pupils tend to favour the same characteristics, although there was a tendency for the teachers to overjudge the sociometric status of those they most preferred, and to underjudge the status of those they least preferred.

⁹Gronlund, N.E., Relationship Between Sociometric Status of Pupils and Teachers' Preferences for Having Them in Class, In Coladarci, A.P. (Ed) Educational Psychology, New York: The Dryden Press, Inc., 1955.

Other Factors. Because of the large number of teachers involved in his study, Gronlund was able to obtain significant results from an investigation of some other factors which might affect teacher judgment. He found that:

There is no relationship between the average accuracy of the teachers' judgments of the sociometric status of pupils and each of the following variables: age of teacher, years of teaching experience, length of time in present position, semester hours of college training, recency of college training, semester hours in education courses, semester hours in psychology courses, size of class, marital status of teacher, and length of time the teacher had been in contact with the class. ¹⁰

Although these results suggest that accuracy of judgment stems from a sensitivity of perception naturally possessed by some and not developed by experience or training it was also found that taking a course in Child Development did improve the teachers' accuracy rate. This apparent contradiction of the lack of correlation found with the taking of education and psychology courses is, perhaps, due to the ability of the experienced teacher, which would not be possessed to the same degree by the more immature college student, to relate elements expounded upon in the course to personal experience in the classroom.

¹⁰ Gronlund, N.E., The Accuracy of Teachers' Judgments Concerning the Sociometric Status of Sixth-Grade Pupils, In Moreno, J.L., The Sociometry Reader, Illinois, The Free Press of Glencoe, 1960, p.579.

III. CORRELATES OF HIGH SOCIOMETRIC STATUS

Throughout the review of research concerned with the factors which correlate with high sociometric status some mention of the characteristics of the opposite end of the social continuum will be made for the purposes of comparison. Although, in this study, the positive emphasis is stressed and the examination of these characteristics was conducted to indicate, to teachers, the aspects of personality which are worth fostering from the children's viewpoint, a knowledge of the factors which correlate with unpopularity might also emphasize the traits which teachers can encourage children to eliminate or control.

The initial section of this discussion will outline the characteristics of personality found in various studies which may be alterable in the classroom, while later sections will investigate the relationship between relatively 'fixed' factors such as age, intelligence quotient, family size, etc.

Personality Characteristics

In this study it has been tacitly accepted that pupils of high sociometric status are likely to be better adjusted personally as well as socially and so an examination of their characteristics may form a means of setting a standard for teachers to work towards in their character development programme.

Dahlke¹¹ compared the results obtained from the California Test of Personality, Elementary Series, with a sociometric test, observation and structure interviews and concluded that the child who received many sociometric choices also had higher scores on the test of personality adjustment. This supports the expectation. The characteristics of pupils who are acceptable, though, are less easily defined. Some studies correlate only two traits while others deal with a multiplicity of factors.

Bonney and Powell¹² noted that highly acceptable children were more conforming, smiling, and co-operative; Hunt and Solomon¹³ add generosity, lack of egocentricity and a greater tendency towards ordered activity than towards restlessness. Austin and Thompson¹⁴, from a list of twenty possible bases of selecting friends, found that generosity and modesty were given

¹¹ Dahlke, H.O., Determinants of Sociometric Relations Among Children in the Elementary School, *Sociometry*, 1953, 16, In Hare, A.R., Handbook of Small Group Research, New York: The Free Press of Glencoe, 1962. p.223.

¹² Bonney, M.E. and Powell, J., Differences in Social Behaviour Between Sociometrically High and Sociometrically Low Children, *J. Educ. Res.*, 1953, 46. In Hare (1962) *Ibid.*

¹³ Hunt, J.McV., and Solomon, R.L., The Stability and Some Correlates of Group-Status in a Summer Camp Group of Young Boys. *Amer. J. Psychol.*, 1942, 55. In Hare (1962) *Ibid.*

¹⁴ Austin, M.C. and Thompson, G.G., Children's Friendships: a study of the Bases on which Children Select and Reject their Friends. *J. educ. Psychol.*, 39, pp.101 - 116, 1948.

the largest percentage while Flotow lists a complex of factors;

... it can be said that pupils having desirable character traits tend to rank high in the social-status scale. Although it would be difficult to single out any one definite trait, such traits as dependability, co-operation, cleanliness, maturity, courtesy, and general helpfulness are most frequently found in varying degrees in those pupils having high scores, whereas such traits, characteristics and factors as chronic illness, instability, immaturity, excessive stubbornness, nonco-operation, nondependability, and uncleanness are found most frequently in those who have low scores. It is, on the whole, surprising how closely teacher and pupil opinion agree on personal traits. ¹⁵

Hardy ¹⁶ also notes that, in attitude towards work, industry, conduct and total adjustment the most liked pupils not only exceeded the grade standard but as a group could be described by ratings of 'excellent' and 'very satisfactory'. While these factors are over-generalized, they do show, as Flotow suggests, that the children themselves have largely accepted as their peer norms the standards which are being promoted by adults.

Another aspect of development, which, although not

¹⁵ Flotow, E.A., Charting Social Relationships of School Children, In Coladarci, A.P., Educational Psychology. New York: The Dryden Press Inc., 1955, p.645.

¹⁶ Hardy, Martha C., Social Recognition at the Elementary School Age, J. of soc. Psychol., Vol.8, 1937.

basically a personality trait, may affect personality development is the pupil's amount of insight into the relationships of others within the class and a recognition of the social standing he himself possesses. Norman¹⁷ found significant positive correlations between the degree of acceptance and insight into oneself and also between insight into oneself and a realistic perception of others, while Exline's¹⁸ finding that the same characteristics exist amongst adults shows the importance of making the child aware of the complexities of social interaction.

Not only does the improvement of perception alter the possible standing of the individual socially but it is also desirable from the viewpoint of educational effectiveness. Steiner¹⁹ has discovered that the efficiency of groups composed of individuals with accurate social perception is of a higher standard than those composed of members with less accurate social perceptions. However, it has been left to the results of the

¹⁷Norman, R.D., The Interrelationships Among Acceptance-Rejection, Self-Other Identity, Insight into Self, and Realistic Perception of Others, J. soc. Psychol., 1953, 37.

¹⁸Exline, R.V. Intercorrelations Among Two Dimensions of Sociometric Status, Group Congeniality and Accuracy of Social Perception, Sociometry, Vol. 23, No. 1, March, 1960.

¹⁹Steiner, I.D., Interpersonal Behaviour as Influenced by Accuracy of Social Perception, Psychol. Rev. 62, 1955.

research by Campbell and Yarrow to relate this aspect firmly to personality development. They considered, that,

The perceptual act has consequences for personal relations; impressions may shape actions just as certainly as actions may shape impressions. Placed in a new situation, the child is not fully free to create an effort to find his place among his peers. Reputations quickly established, shape expectations and in part draw out behaviour from the child that is in accord with such expectations. 20

The implications for the careful planning of early group experiences are obvious.

Sex Differences

Separate consideration should be given to the personality differences between the sexes. Macfarlane, Honzik and Davis²¹ found that even at the ages of seven and eight the correlates of popularity and unpopularity show different configurations for boys and girls. The differences, in general, appear to reflect many facets of aggression. Bloom²² noted that these

²⁰Campbell, J.D. and Yarrow, M.R. Perceptual and Behavioural Correlates of Social Effectiveness, Sociometry, Vol.24, No.1, March, 1961. p.18.

²¹Macfarlane, J.W., Honzik, M.P. and Davis, M.H., Reputation Differences Among Young School Children. J. educ. Psychol., XXVIII, (March, 1937).

²²Bloom, B.S., Stability and Change in Human Characteristics, New York: John Wiley & Sons, Inc., 1964.

differences were probably culturally determined; that aggression is frowned upon in girls, and especially in women, but is looked upon as natural in boys and is even regarded as a measure of their manliness. He also made the interesting suggestion that the amount of aggression possessed by each sex might not be greatly different but that while boys' aggression was overt and obvious, that of the girls was released in more subtle ways and so had merely escaped the attention of observers and raters although it was still present. Tuddenham shows an awareness of the same idea in his statement,

It is suggested that the problem of securing group approval for a boy is one of conforming to a clearly defined group of traits for which he may or may not possess the requisite strength and motor skill. For a girl, the problem is more one of adapting to a continuously changing set of values which are never as closely defined as they are for the boy. ²³

Bonney adds some supporting evidence in the finding that while the differences between the sexes were not large, they were consistently in favour of the girls and that in only two of the traits rated were there highly reliable sex differences. These were 'restless' and 'fights' and the boys had higher frequencies. He also showed that these were the only traits in

²³Tuddenham, R.D., Studies in Reputation. III. Correlates of Popularity Among Elementary School Children. J. Ed. Psych. 42. 1951, p.276.

which the most popular boys had reliably higher averages than the most popular girls, and considered that, the contribution of his study of sex differences was,

... in emphasising the need, on the part of adult leaders of children, of being more concerned about developing social skills in boys, and of instituting a type of social control which allows expression of aggressive traits. When boys do not acquire facility in social skills they feel inferior and are likely to compensate in socially disapproved ways; when their normal aggressive impulses are denied expression their typical response is either to fight back in some way or to leave the situation - whether it be home, church or school. ²⁴

That there are two types of aggression even within the one sex is recognized by Campbell and Yarrow²⁵. They note that what is, for the accepted child, merely part of a behavioural repertoire may for the unaccepted be viewed as hostile actions and they also suggest that aggression, suitably accompanied by friendly behaviour, is in fact socially valued.

Shaw²⁶, in considering isolated and unpopular children, found that usually they fell into one of two categories - either recessive or aggressive. In one case the ineffectiveness of

²⁴ Bonney, M.E., Sex Differences in Social Success and Personality Traits, Child Development. Vol.15, No.1, March, 1944, p.77.

²⁵ Campbell and Yarrow, op. cit.

²⁶ Shaw, H.A., Study of Popular and Unpopular Children, Educational Review, Vol.6, No.3, 1953-54.

personal attempts at friendship formation caused the child to withdraw from social contact, while in the other the aggressive behaviour took the form of destruction, interference with others, boisterousness and rudeness which, of course, was met with further rejection. Neugarten²⁷, notes that, in the child of eleven or twelve, such aggressive pupils soon became aware of their reputation and became 'behaviour problems' in school so that in spite of increased rejection they at least enjoyed a definite reputation, unenviable though it really was.

Summary

Both sides of the popularity coin have been summarized by Shaw,

The popular child works quietly, is not talkative, is active in games, is daring, initiates games, never loses his temper, is cheerful and jolly, goodlooking, tidy, is liked by everybody, enthusiastic, likes the opposite sex, enjoys a joke on self, is humorous, fights, does not seek attention, is friendly, loyal and sociable. The unpopular child is restless, talkative, not daring, not goodlooking, unkempt, not liked, not friendly, not sociable. He lacks initiative, loses his temper, does not enjoy a joke on self and tells tales.

There was not one occasion, within the groups, when the unpopular children were chosen significantly for a trait obtained significantly by the popular children of any of the groups. 28

²⁷Neugarten, E.L. Social Class and Friendship Among School Children. Amer. J. Sociol., 51, 1946.

²⁸Shaw, H.A., loc. cit., pp. 216-217.

In general, the characteristics of the most chosen pupils are those of congenial conformity moving in the direction of adult standards. High acceptability, from this summary of research, might be equated with social maturity, i.e., the acceptance of a set of behaviour standards seen as desirable by society as a whole. The circularity of many of these traits poses a problem for the socially unaccepted - it is not surprising to find that a person rated as 'unfriendly' is not often chosen, while it is hardly possible for the 'unfriendly' behaviour to alter as long as it is met with rejection or being ignored. At the same time, however, if improved behaviour is reinforced then the unacceptable pupil may be motivated to continue the improvement permanently. All of the factors mentioned in this section are susceptible to improvement and so while some fluidity of personality structure is still apparent, relatively large variations could be made in the social status of any individual.

Intelligence and Achievement. Two related factors which have been the subjects of research to determine their effect upon popularity are intelligence and academic achievement. Gronlund²⁹, reporting on several studies which showed correl-

²⁹Gronlund, H.E. Sociometry in the Classroom. New York: Harper & Brothers, 1959. pp. 191 - 192.

ations between intelligence and social status ranging from .27 to .45, suggested that although there is little direct relationship shown, intelligence level could be a major factor in friendship selection with pupils of extremely low or extremely high ability. He also noted that there was a greater tendency for pupils of high intelligence to have low scores than there was for pupils of low intelligence to have high sociometric scores and considered that while low intelligence might affect the formation of friendships, a higher level of ability did not guarantee social success. A similar finding is reported by Hardy³⁰. Correlations of .332 between intelligence and status, found by Jenkins³¹, led him to conclude that intelligence was a factor independent of school sectioning.

Bonney reviewed several studies which showed correlations ranging from .07 to .51 while another study in this report found correlations of .62 and .60 for mental age and status but only .15 and .10 for Intelligence Quotients. Bonney, in summing up, said,

The general trend of these results can scarcely leave any doubt but that similarity in intelligence is one factor in determining mutual friendships. A practical

³⁰ Hardy, W.C., (1937) op. cit.,

³¹ Jenkins, G.G., Factors Involved in Children's Friendships, J. educ. Psychol., 22: 1931.

application of these findings is the suggestion to parents that they make sure their children are able to associate with others who are of an approximate degree of brightness. ³²

Considering achievement and intelligence to be related to social status, Laughlin³³ found positive correlations for both but that these were very low, however, Davis in his study and Porterfield and Schlichling in theirs all found significant relationships between reading ability and peer status which suggests that there is a connection between academic achievement and sociometric status. Lindgren and Guedes³⁴, in a study of Brazilian children, support this conclusion but Taylor³⁵ offers a conflicting opinion in his statement that,

There is no significant relationship between a child's social acceptance and the bias of his ability profile although the data suggest that non-verbal children may be more acceptable in the traditional than in other types of classrooms.

³² Bonney, M.E., A Study of the Relation of Intelligence, Family Size, and Sex Differences with Mutual Friendships in the Primary Grades. Child Developm. Vol. 13, No. 2, June, 1942.p.83.

³³ Laughlin, F., The Peer Status of Sixth and Seventh Grade Children, Bureau of Publications, Teachers' College, Columbia Univ., New York, 1954.

³⁴ Lindgren, H.C., and Guedes, H. DeA., Social Status, Intelligence, and Educational Achievement Among Elementary and Secondary Students in Sao Paulo, Brazil, J. soc. Psychol., 1963, Vol.60.

³⁵ Taylor, E.A. Some Factors Related to Social Acceptance in Eighth Grade Classrooms. J. educ. Psychol., 43, 1952.

With such a bulk of evidence suggesting that there is a relationship between intelligence and/or achievement and social success, these must be admitted as factors of some importance but the negative conclusions and the low correlations reported indicate that a lower intelligence quotient alone is not likely to cause unpopularity, with the converse being equally true, and so concentration, by the teacher, upon stronger assets in the child's make-up could equalize any deficiencies in intelligence or school achievement.

Age. Some wide differences of opinion about the relationship between age and sociometric status appear from a comparison of results by different investigators. Laughlin³⁶ found no relationship to exist, but Campbell³⁷, in a New Zealand study of children whose ages differed from the class mean by twelve months or more, found that the over-age were significantly lower in acceptability and that underage pupils scored higher than the sample as a whole. A further result, that children who were socially promoted scored lower than the average, suggests

³⁶Laughlin, F., op. cit.

³⁷Campbell, W.J., The Social Acceptability of Over-Age and Under-Age Pupils, The New Zealand Bulletin of Psychology, Vol. No. 2, April, 1955.

that age is not the only factor operating. Bedoian³⁸ found a similar result when investigating children who deviated by more than nine months from the class mean. He added the finding, however, that although the younger pupils had the highest social status, those who were between twelve and fourteen months lower than the mean were not as popular as those who were only nine months lower. The study by Morrison and Perry³⁹ found the same result up to the sixth-grade but in the seventh and eighth grades the over-age children had improved in status to equal the average. This was explained as being due partly to greater success in physical activities and partly to a higher proportion of cross-sex choices being made to the older boys by the earlier maturing girls.

The effect of age upon popularity is a factor which is beyond the control of the class teacher but which is affected by the method by which school promotions are made. Taylor studied this aspect and considered that,

³⁸Bedoian, V.H., Social Acceptability and Social Rejection of Under-Age, At-Age and Over-Age Pupils in the Sixth Grade, J. Ed. Res., 1954, 47. Quoted from Gronlund, N.E. (1959)

³⁹Morrison, I.A. and Perry, I.F., Acceptance of Over-Age Children by Their Classmates, Elementary School Journal, 1956 Vol. 57.

Present-day chronological age promotion policies in public schools are based on the assumption that children are more socially acceptable to those of their own chronological age than to those of their own mental age. In present-day grade groupings resulting from this policy, the assumption is not justified by the evidence. ⁴⁰

Because a child is in a class of children of approximately the same age as himself he is forced to choose them as friends. Jennings's ⁴¹ finding, that there was a larger spread in the ages of friends made outside school, supports Taylor's view that presenting a child with companions of about his own age is not likely to make him more acceptable to them. From the other results outlined, however, it is apparent that, if other factors are equal, age differences could be expected to influence a child's popularity.

Physical Factors

Two aspects merit consideration in connection with physical factors - the possession of an attractive physical appearance and the level of ability in physical skills. In the research studies for which results are available, all which examined physical attractiveness noted its positive

⁴⁰Taylor, E.A., op. cit.

⁴¹Jennings, G.G., op. cit.

relationship with sociometric status. Bonney⁴² showed that being 'good looking' was a factor which counted in inter-personal contacts and Young and Cooper⁴³ showed a similar result with their 'attractiveness of facial appearance'. Gronlund⁴⁴ summarizes a review of research on physical attractiveness by stating that:

Studies among school children at various grade levels (1, 8, 41, 46,) have consistently indicated that pupils who are highly chosen on a sociometric test are characterized as being "good looking", "neat in appearance", and "physically attractive". Those pupils who are rejected most frequently by their peers are characterized as being physically unattractive and unkempt in appearance(33). There appears to be a closer relationship between physical appearance and sociometric status at the junior and senior high school levels, and the relationship tends to be more pronounced in the case of girls. However, physical appearance shows some relationship to sociometric status at all age levels and among both sexes.

In his examination of physical aspects, Hardy⁴⁵, noted that the state of health could influence the popularity rating. He found that 61 per cent of the best liked pupils

⁴²Bonney, M.E. Personality Traits of Socially Successful and Socially Unsuccessful Children. J. educ. Psychol., 1943, 34.

⁴³Young, L.L. and Cooper, D.H., Some Factors Associated with Popularity, J. educ. Psychol., 1944, Vol.35.

⁴⁴Gronlund, N.E. (1959) op. cit., p.200

⁴⁵Hardy, M.C., (1937) op. cit.

were in 'good' physical condition, compared with 36 per cent of the total group and only 20 per cent of the least popular pupils. All aspects of good physical appearance were related to popularity except impaired vision which showed no relationship and the person's actual size which was also found to be unimportant. The relationship between health and the level of vitality displayed, which is a possible dynamic in interpersonal relationships, was not discussed but could, perhaps, be tentatively assumed.

In relation to physical skill, a study by Lippitt, Polansky and Rosen⁴⁶ showed that physical prowess was a factor in personal liking while Davis⁴⁷ reports a correlation of .79 between 'athletic skill' and general acceptance. Gronlund, however, sounds a cautious note in relation to physical skills since he considered that,

although the possession of skills and participation in activities attracts favourable attention from peers, there is no assurance that the individual will be accepted as a companion for close interpersonal relationships. The value a particular group places on the

⁴⁶Lippitt, R., Polansky, N., and Rosen, S., The Dynamics of Power; a Field Study of Social Influence in Groups of Children, Hum. Relat., Vol. 5, 1952.

⁴⁷Davis, J.A., Correlates of Sociometric Status Amongst Peers, J. educ. Res., April, 1957.

activity in which the skill is demonstrated, as well as the extent to which the individual possesses those personality characteristics that count most in interpersonal contacts, will also influence the degree to which he is accepted. ⁴⁸

It appears that good appearance and the possession of some physical skill can be desirable assets for social acceptance but alone can not be expected to produce high status.

The development of skills may help to win social acceptance but the operation of a 'halo effect' in the favour of the most popular children may cause their deficiencies in this area, if any, to be overlooked and the actual ability of someone less popular to be undervalued.

Home Environment

The home environment, as the basic mould of personality, should have some relationship to a child's success in the attainment of a satisfactory state of socialization in his school life. It was seen by Flotow ⁴⁹ as being a vital factor in the establishment of satisfactory relationships at school and he has noted that, although his study was limited by the relatively narrow range of socio-economic status of those taking part, it appeared that it was the quality of the relationships within the home which affected the child's acceptability rather

⁴⁸ Gronlund, N.E., (1959), op. cit., p.199-200.

⁴⁹ Flotow, E.A., (1955), Loc. cit.

rather than standard of the parents' possessions. Pupils from broken homes, foster homes and homes where parental relationships were unsatisfactory were, usually, found to be low in social status. Volberding⁵⁰, suggests that the socio-economic status of the home does have a bearing, however, and found that successful children came more often from middle-class homes than from upper/lower-class, and more often from upper/lower-class than from lower/lower-class homes. Tentative support is given to this finding by Sewell⁵¹ who found a tendency for lower-class children to exhibit more neurotic personality traits than middle-class children and it could be expected that these would have a negative effect on sociometric status.

From the tendencies shown in these three researches it seems that the human relationships of the home environment rather than the socio-economic status of the home itself might be the important factor in the social development of children but it also suggests that this relationship between parents and children might be found more often in homes of higher socio-

⁵⁰Volberding, E., Characteristics of Successful and Unsuccessful Eleven Year Old Pupils. Elementary School Journal, Vol. XXIX, No.7, March, 1949.

⁵¹Sewell, W.H., Social Class and Childhood Personality, Sociometry, Vol.24, No.4, December, 1961.

economic status than in those with a lower socio-economic rating.

Number in Family and Ordinal Position

Two further aspects related to the home environment are the number of siblings a child has and the ordinal position of the child and some research has sought to find a relationship between these and popularity at school. Young and Cooper⁵² compared the extremes of popularity and found that there was no relationship between the number of siblings a child had and his sociometric status and in an investigation of the status of 'only children' found a low negative correlation but it was not significant. A negative and non-significant relationship was also found by Thorpe⁵³ in relation to status and family size while "in respect of ordinal position, in larger families the younger children were of slightly higher status than the older".

Considerably different results were obtained by Bonney⁵⁴

⁵²Young, L.L., and Cooper, D.H., (1944), op. cit.

⁵³Thorpe, J.G., Factors in Friendship Formation, Sociometry, Vol. 18, 1955. Quoted from Croft, I.J., and Grygier, T.G., Social Relationships of Truants and Juvenile Delinquents, Hum. Relat., 1956, Vol. 9.

⁵⁴Bonney, M.E. A Study of the Relation of Intelligence Family Size, and Sex Differences with Mutual Friendships in the Primary Grades, Child Developm., Vol.13, No.2, (June, 1942).

who found that, without exception, the only child was in a superior social position and that the children from medium-sized families of two or three children scored lower in social acceptance than those children from families of four or more. A parallel finding was noted when the number of siblings within five years of the age of the child being studied was taken into account. Again the most popular children were those who had the smallest number of brothers and sisters who could be considered playmates.

Since these results conflict, it is not possible to generalize about these factors. However, although they should be remembered as possible contributing causes, it may be concluded that, for the practical purposes of the classroom, neither the family size nor the ordinal position of the child within the family need be considered as a major factor in social interaction.

Proximity

To some extent the school environment, through its division of the children into classes, tends to force choices amongst those who are in close proximity for a large portion of the day. DeVault⁵⁵ showed that this effect was most noticeable

⁵⁵ DeVault, M.V., Classroom Sociometry: Mutual Pairs and Residential Proximity, J. educ. Res., April, 1957.

in the lower grades and that children tend to choose friends among their classmates from those who live successively further away as they progressed through the grades. Close proximity, not only at school but also at other times, appears to assist in friendship formation and this should be noted by teachers when attempting to influence such interaction.

In his study, Bryne⁵⁶ found the influence of propinquity in the classroom to be a 'stable and predictable' phenomenon and assessed the period for the formation of friendships to become effective as being between three and a half and seven weeks. Of particular importance, for its classroom implications, was his additional finding that close proximity is necessary and that "cross-row neighbours are no more likely to form relationships than non-neighbours are". The research by Rosenfeld^{56a} while not specifically concerned with physical proximity may illuminate this situation. He found that in selecting companions for classroom tasks there was a tendency to select not so much the most competent partner but rather the partner who was seen as being actually available. If a

⁵⁶ Bryne, P., The Influence of Propinquity and Opportunities for Interaction on Classroom Relationships, Hum. Relat., Vol. 14, No. 1, 1961, p. 61.

^{56a} Rosenfeld, H.M. Social Choice Conceived as Level of Aspiration. J. abnorm. soc. Psychol., 48, No. 5, 1946.

parallel position applies in physical proximity, and the findings of Bryne suggests that it does, then seating an unpopular child amongst those of higher status could be an initial step on the way toward improved acceptance.

Leadership and Some Related Aspects

The preceeding review of research has shown a multiplicity of factors affecting the social acceptability of the child. Brief reference will now be made to studies which identify some of the characteristics of children possessing leadership potential and to some aspects related to the use of such children in the furtherance of social relationships within the classroom.

While investigating leadership in small groups, Gardner⁵⁷ found that functional leadership was directly related to popularity and that this efficiency tended to reinforce itself through 'halo effect'. Jennings⁵⁸, adopted a more cautious attitude and considered that although there was a

⁵⁷Gardner, G., Functional Leadership and Popularity in Small Groups, Hum. Relat., Vol. IX, No.4, 1956.

⁵⁸Jennings, H.H., Sociometric Structure in Personality and Group Formation, In Group Relations at the Crossroads, Sherif, Muzafer, and Wilson, M.O. (Ed.) New York: Harper & Brothers, 1953.

high correlation between 'leadership' and 'high choice status' this could not be interpreted as meaning that the two were equated. However, in view of Gardner's evidence and that found in other studies, it seems that leadership and status can be equated unless other factors nullify the leadership potential in specific cases.

It has been found by Polansky, Lippitt and Redl⁵⁹, and also in a further study by Lippitt, Polansky and Rosen⁶⁰, that those who have high group prestige are readier to act spontaneously in their groups and to attempt more often to directly influence others. Although this attempt at leadership may be based upon a higher level of empathy, as is suggested by Bell and Hall⁶¹, it seems that many of the other personality characteristics which have already been discussed must also be operating. Many of these traits, however, show the circularity which

⁵⁹Polansky, N., Lippitt, R., and Redl, F. An Investigation of Behaviour Contagion in Groups, Hum. Relat., Vol. 3, 1950.

⁶⁰Lippitt, R., Polansky, N., and Rosen, S., The Dynamics of Power: a Field Study of Social Influence in Groups of Children. Hum. Relat., Vol. 5, 1952.

⁶¹Bell, G.B., and Hall, H.E., The Relationship Between Leadership and Empathy, J. abnorm. soc. Psychol., Vol. 49, 1954.

should constantly increase the popularity of the leader and therefore increase his leadership effectiveness. Borgatta⁶² notes that "persons who are highly active generally attract a greater proportion of the positive affective behaviour of the co-participants". Interaction, it seems, develops skill in further interaction and so increases the original measure of acceptance.

It is apparent that, if this analysis is correct, the class would soon revolve around a very few effective leaders and this may be a danger which should be guarded against since if there are some who are sociometrically 'extremely wealthy' then there must be others who are sociometrically 'extremely poor' although Connor⁶³ found that this was, in fact, the case with those classes which were rated as having a 'good climate' socially.

In relation to this thesis, leadership is important not for its causative characteristics but as a vehicle for the alteration, by pupils, of the class's social situation.

⁶²Borgatta, E.F., Analysis of Social Interaction and Sociometric Perception, In Moreno, J.L., (Ed.) Illinois: The Sociometry Reader, The Free Press of Glencoe, 1960.

⁶³Connor, D.V., Behaviour in Class Groups of Contrasting Climate, Brit. J. educ. Psychol., Vol. XXX, Pt.III, Nov. 1960.

Teacher direction of pupil accepted leaders and their function within an 'official' task oriented group should be a means of increasing the amount of desirable interaction amongst a particular set of pupils. Drawhorn⁶⁴ considered, in an examination of working groups, that the time the group was involved in following some objective was related to further choices received and mutual choices thus indicating the formation of a 'psycho-group' within the 'socio-group'. Planned rearrangement of groups for specific projects should thus enable teachers to encourage the reluctant or the inept to react in a social unit and through the repetition of such experiences to foster the social skills necessary for peer acceptance.

Conclusion

Throughout this review of the literature, two aspects have been considered. Teacher awareness has been shown to be sufficiently imprecise in other countries to warrant the use of objective techniques to aid their social perception, and also various correlates of high sociometric status have been discussed.

⁶⁴ Drawhorn, C.L., A Study of the Sociometric Hierarchy of Elementary Education Majors. J. educ. Res. Vol.L, No.4, December, 1956.

CHAPTER IV

INTRODUCTION TO THE EXPERIMENTAL SECTION

I. OVERVIEW OF THE PROBLEM

In the review of the literature almost all the studies discussed presented results obtained in the American educational situation. The remainder of this thesis has been directed towards research to discover whether comparable results can be obtained through the use of sociometry in New Zealand schools.

The survey of all the selected classes through the means of the sociometric test forms the basis of this investigation and from the data obtained on this test comparisons have indicated the degree of relationship between these results and those obtained in other countries, and have also given some measure of the stability of sociometric status in children and of the reliability of the sociometric test itself.

Using the status ratings found by the sociometric test the two major emphases of the study have been investigated. The first examines the level of awareness which teachers have of their children's peer acceptance through the ratings made by the teachers of each child's actual sociometric status while another facet of this problem has been approached through the ranking of the most popular pupils. Each of these ratings is

complementary and is intended to examine fairly the awareness of acceptance in detail, not only in relation to the sociometric test as such, since its categories would be unfamiliar to many teachers, but also in relation to the more readily assessable 'most popular' children of whom all teachers can be expected to be aware. This section of the thesis should suggest whether or not sociometry could be a useful tool for practising teachers in this country.

The related section on pupil awareness of pupil status has been presented in juxtaposition to the results for teacher awareness since they examine the same problem, assessment of status, but from the viewpoint of participant rather than observer.

The second major topic of the experimental chapters is an examination of some possible correlates of high sociometric status. Review of the literature suggested that although many studies have investigated various possible correlates, the bases of enquiry have been arbitrarily selected by the investigator himself. In this research an attempt has been made to determine which factors of personality and behaviour are seen as acceptable by the children themselves. 'Guess Who?' tests based upon characteristics most commonly suggested by the children have been used in the eduction of a set of traits of peers of high status from the child's own viewpoint, undirected by adult

preconceptions. Several environmental factors which could influence peer acceptance have also been selected and examined while an additional factor, which appeared to be assumed but not investigated in the literature, was the relationship between sociometric status and attitude towards school. This factor has also been subjected to consideration. This part of the experimental design is an endeavour to provide a set of traits, considered desirable by the peer group itself, which will indicate to teachers areas of emphasis for positive action in the rehabilitation of isolated and neglected pupils.

II. SELECTION OF SUBJECTS

Population Studied in First Survey (1961)

School A chosen for the study was a decapitated, urban primary school, i.e. catering for pupils from Primer One to Standard Four, situated in a residential area fringed on one side by an industrial zone. There was a wide variation in the standard of housing within the school's area ranging from high standard, modern, completely residential settlements to small cottages surrounded by industrial sites and factories. Semi-permanent accommodation was available at a nearby motor-camp and the children from there also attended the school. The heterogeneous nature of their material backgrounds was reflected in the appearance of the children only to a minor extent as

nearly all were neatly dressed, most of them being in school uniform.

Classes Studied in 1961. The six most senior classes were studied in the first survey. Thus, two classes from each level - Standards 2, 3, and 4 - were tested although one class which was predominantly a Standard 3 also contained twelve Standard 2 children¹. As a teacher at School A, the experimenter had had close contact with the upper standard classes during the previous three years and, since all of this period had been spent teaching the Standard 3 level, many of the children were known as pupils of the present or previous year's class. It was felt also that with children in classes below Standard 2 undue difficulties in reading and comprehension of the tests involved would outweigh the value of any additional information gained. A summary of the numbers of children in each class level is presented in Table I.

Population Studied in Second Survey (1962)

Retesting at School A. Since retesting of the children studied the previous year was desirable to enable comparisons of results to be made, the four senior classes in School A were

¹For the purposes of this study these children were considered as being in the Standard 3 social situation and have therefore been included in Table I as Standard 3 children.

again tested in 1962. Class numbers had necessitated the formation of composite classes - one at the Standard $3/4$ level and one at the Standard $2/3$ level, and so class groupings were different from those involved in the first survey. Further, the Standard $2/3$ composite class introduced children who, being in Standard 1 in 1961, had not been tested previously.

Follow-up Testing at School B. The second school involved in the study, School B, was an intermediate school situated about half a mile from School A. Four contributing primary schools, including School A, send pupils to the intermediate and it was therefore possible to follow up the Standard 4 children studied in 1961 to compare changes caused by the move into a different educational situation, with new social contacts and different class groupings. All the Form I classes at School B were tested - a total of 255 cases (Table I).

III. ADMINISTRATION OF THE TESTS

First Survey (1961)

During 1961, tests were administered to the children in the period extending from the last week in November to the end of the second week in December - approximately three weeks. As far as possible, each test was taken by the total population

TABLE I
NUMBER OF CASES STUDIED AT SCHOOL A
IN THE FIRST SURVEY (1961)

Class	Boys	Girls	Total
Std. Four	39	29	68
Std. Three	32	31	63
Std. Two	42	34	76
All Classes	113	94	207

TABLE Ia
NUMBER OF CASES STUDIED AT SCHOOLS A AND B
IN THE SECOND SURVEY (1961)

Class	Boys	Girls	Total
Form One	136	119	255
Std. Four	32	33	65
Std. Three	38	32	70
Std. Two	10	9	19
All Classes	216	193	409

to be surveyed before moving on to the next test. All tests were conducted personally and supervised throughout by the experimenter.

Second Survey (1962)

For the retesting in 1962, the same period - late November and early December - was chosen, giving a twelve months interval and duplicating the conditions as closely as possible. As in the initial survey, all tests were conducted by the experimenter but owing to the complexity of the intermediate school timetable and the limited time available at School B the final test, at that school, the "Guess Who?", was administered by the teacher of each class.

Rapport

Good rapport for the administration of the various tests appeared to be easily established. When the classes in School A were approached for assistance with this research project they were told that their answers would help teachers in general and the experimenter in particular as he was "going to write a book" about children's friendships at school. It was repeatedly stressed that the test results would be confidential to the experimenter. Having known the experimenter for the previous three years, as a teacher at School A, the children were anxious to assist. Nearly all testing was

carried out during school time but the few cases who were absent during the class test willingly remained after school to take the test missed.

At School B, the experimenter was known to approximately one quarter of the pupils as these had been at School A and had been tested the previous year. The remaining children seemed pleased to help also and the completed forms indicate that the responses were genuine.

CHAPTER V
THE SOCIOMETRIC TEST

I. CONSTRUCTION OF THE SOCIOMETRIC TEST SOME
THEORETICAL CONSIDERATIONS

Under Moreno's definition, "The sociometric test requires an individual to choose his associates for any group of which he is or might become a member."¹ This implies choice without restraint, whether the individuals chosen are members of the group or outsiders, and may be considered valid in an unorganised or loosely structured situation. In the school classroom however it is obviously not possible to allow choices from outside the class group and here the sociometric test is used in a more limited manner.

Since groups are formed for some common purpose of the individuals involved, and since an individual may choose different companions for different activities, the choice of criteria in the construction of the sociometric test is of considerable importance.

Moreno, and later Gronlund, postulated several prerequisites for an acceptable measure of validity. Moreno concluded that "Criteria questions are of exploratory value if they are

¹ J.L. Moreno, Who Shall Survive? p.93

significant to the members of the group at the time of the test;"² and also: that:

The theory of sociometric testing requires: a) that the participants in the situation are drawn to one another by one or more criteria, b) that a criterion is selected to which the participants are bound to respond, at the moment of the test, with a high degree of spontaneity, c) that the subjects are adequately motivated so that their responses may be sincere, d) that the criterion selected for testing is strong, enduring and definite, and not weak, transitory and indefinite. 3

Gronlund has amplified Moreno's statement on criteria by analysing several types. A brief explanation of each of these types will show some of the considerations underlying the choice of criteria for the sociometric test used in this study.

(a) General Vs. Specific Criteria. A general criterion indicates an area of activity without specifying particular bases of interaction e.g. seating companion, whereas a specific criterion indicates a very limited basis for interaction e.g. dancing.

(b) Strong Vs. Weak Criteria. Although the situation does influence the strength of the criterion used, in general a strong criterion is one which reveals the underlying and more permanent

²Ibid. p.99

³Ibid. p.99

social relationships whereas a weak criterion reflects the more superficial and transitory aspects of the group's social situation.

(c) Actual Vs. Hypothetical Criteria. Here the distinction lies in the reality of the testing situation, whether the test's results will actually alter the child's situation or whether it is performed as an academic exercise. This appears to be a motivational aspect rather than a separate type as such.

(d) Personal Vs. Social Criteria. Whether a criterion is personal or social depends upon the nature of the activity for which the group is formed i.e. whether for a personal end or for the performance of a common activity by the whole group.

(e) Two-way Vs. One-way Criteria. The last distinction made is between the situation in which a mutual choice is possible e.g. for seating companion, dancing, etc., and the situation in which no reciprocation is intended, e.g. the election of leaders.

Finally, Gronlund excludes as "near-sociometric procedures" any type of question which does not indicate a clear criterion of choice.

II. THE SOCIOMETRIC TEST USED IN THIS SURVEY

Three separate criteria were selected for the purposes

of the survey. The children were asked to nominate which other children they would like to sit beside in school, those they would like to play with, and (assuming they were allowed to) the children they would like to have home to stay with them for the weekend.

The "Seating companion" criterion was chosen as being the most realistic choice situation in the ordinary class in a primary school as this is an area which is often influenced by the desires of the children themselves. It assumes a sufficiently strong liking for a person to wish to associate for several hours daily in close proximity and this usually implies a sharing of work interests and possibly of play and outside interests also. It is the criterion likely to be used most often by the practising teacher and, further, since many sociometric studies have used it, more comparable results might be expected. Theoretically this criterion seems to conform fairly closely to the requirements outlined by Moreno and Gronlund as it is sufficiently general to allow continuous and varied interaction situations; it is 'strong' as it reflects associations likely to be of lasting duration; personal as the child is effectively influencing the situation for his own ends, and is mutual in character.

"Play companion" was a criterion which offered the subjects an opportunity to choose those of their fellows with whom

they would like to associate but in a situation slightly further removed from that afforded by the seating companion choice. Quite often, children appear to play happily with certain of their fellows while out of doors but their liking is not sufficiently strong to maintain the attraction in the closer and more enduring relationships involved in sharing desks within the classroom. This criterion is harder to classify as it may be general or specific according to the interpretation placed upon the word 'play' by each child. It is more likely to measure transient relationships, and it is only personal and mutual to the extent that the child considers it likely that the expressed choices may be implemented. Again, however, play companion has been used in several studies and was considered to be of value for comparison with these and with the other two criterion used.

The third, and most hypothetical, of the criteria selected was the choice of children who might be invited to visit the subject's home for the weekend. Here the selection of companion may be influenced not only by personal preference but also by the likely parental reaction to the visitor proposed. This implies, perhaps, if not a closer relationship than was involved in the choice of seating companion or play companion then at least a choice of associate who, in the

chooser's opinion, behaves in a manner acceptable not only to him but to adults also. This criterion satisfies all the requirements suggested except that it is an hypothetical situation, and while many children do stay with each other for weekend visits the responses to this criterion might vary in spontaneity according to the experience of the child involved.

While the sociometric test which is taken for research purposes is not as likely to conform to the theoretical ideal as that which is designed to meet the needs of a practical situation a compromise seems possible. The hypothetical nature of the criteria used and the lack of any tangible change in the child's own social contacts may, to some extent, be offset by the subjects' appreciation of the reasons for such a survey and this, combined with other favourable motivational factors, should help to produce valid responses.

Blyth reported that:

It was doubted whether non-implemented choices would be validly expressed, but Byrd (1951) and Mouton, Blake and Fruchter (1955) have shown that hypothetical choices are quite genuine, while Ejerstedt, in his important contribution to the theoretical discussion of all aspects of sociometry (Ejerstedt, 1956) has indicated that only 11% of the investigations which he examined in the entire sociometric field included

implementation of choices.⁴

In view of these findings, and also considering the testing situation, it seemed reasonable to assume that the test would elicit spontaneous and genuine answers.

III. SCORING THE SOCIOMETRIC TEST

The choices made on each child's sociometric test form were recorded on a matrix table of the type originally used by Jennings⁵ and modified by Gronlund. Separate matrix tables were completed for each class and for each sex since cross-sex choices were few; where these did occur the name of the person chosen was written in on the matrix table of the person choosing. Mutual choices were also noted to aid in the construction of sociograms.

After a matrix table had been completed for every criterion, each child's score of choices received was totalled. The average of the three scores obtained was considered to represent a fair assessment of the child's status as it covered, to some extent, the possibility that a particular individual may have scored an unduly high or an unduly low number of

⁴W.A.L. Blyth, The Sociometric Study of Children's Groups in English Schools. Brit. J. educ. Studies, Vol. VIII No. 2. May, 1960. p.127.

⁵H.H. Jennings, Structure of Leadership-Development and Sphere of Influence, Sociometry, 1937, 1: p.99 - 143.

choices on one criterion. Since Gronlund⁶ found that there was no significant difference between the use of weighted, (i.e. the allocation of a value scaled according to whether the choice received was a first choice, a second choice, etc.) or unweighted scores, no weighting of scores was used in this study.

Each child's "status score" - the average of the three scores obtained - was then interpreted using Bronfenbrenner's⁷ fixed frame of reference and all subjects were classified into one of the sociometric categories: Star, Above Average, Below Average, Neglectee, or Isolate. Since only six cases were recorded in the Isolate category these have been included with the Neglectees in the compilation of results.

IV. RESULTS OF THE SOCIOMETRIC TEST

Percentage of Cases in Each Sociometric Category

The sociometric test showed similar results throughout all classes tested. As expected, the Above Average and Below Average categories combined contained the largest number of

⁶ Gronlund, N.E. The Relative Stability of Classroom Social Status with Weighted and Unweighted Sociometric Status Scores, J. educ. Psychol., 46, 345-354.

⁷ Bronfenbrenner, U., The Measurement of Sociometric Status, Structure and Development, Sociometry Monographs, No. 6, New York, Beacon House, 1945. Quoted from Gronlund, N.E., Sociometry in the Classroom, New York, Harper and Brothers, 1959.

cases - at School A, 72 per cent in the first survey and 71 per cent in the retest while School B had 83 per cent in these categories. As Table II shows, the remaining percentages were divided fairly evenly between the extremes, approximately 14 per cent of the cases being in each Star and Neglectees category in both surveys at School A while at School B 7.8 per cent rated as Stars and 8.6 per cent as Neglectees.

School A. When considering the results for both sexes together it was found that, at School A, there was a wide variation in the percentage of cases which occurred in each category although the range of the extremes was similar in each survey. In 1961, the lowest percentage of Stars in any one class was 6.7 per cent while that of the Neglectees was 7.7 per cent. The upper extreme in both cases was 21 per cent and the averages were 14 per cent and 13.5 per cent respectively - a close correspondence, (Table III). Similar results were obtained in the 1962 survey as the Stars then ranged from 7.9 per cent to 20.7 per cent with an average of 14.3 per cent while although the Neglectees showed a considerably greater range, from 5.3 per cent to 27.3 per cent (an increase of 8.7 per cent) the average was again 14.3 per cent.

TABLE II
 PERCENTAGE OF CHILDREN IN EACH
 SOCIOMETRIC CATEGORY

School A (1961)

	Stars	Above Av.	Below Av.	Neglectees
Boys	14.16	37.17	34.51	14.16
Girls	13.83	32.98	40.43	12.76
Total	14.01	35.27	37.20	13.52

School A (1962)

	Stars	Above Av.	Below Av.	Neglectees
Boys	17.50	28.75	38.75	15.0
Girls	10.81	40.54	35.14	13.51
Total	14.28	34.42	37.01	14.29

School B

	Stars	Above Av.	Below Av.	Neglectees
Boys	10.29	33.83	46.33	9.55
Girls	5.05	52.94	34.45	7.56
Total	7.84	42.75	40.78	8.63

TABLE III
 PERCENTAGE OF CHILDREN RATED IN EACH SOCIOMETRIC CATEGORY
 SHOWING RANGE FOR CLASSES WITHIN EACH SCHOOL AND
 THE SCHOOL AVERAGE

School A (1961)				
	Stars	Above Av.	Below Av.	Neglectees
Range	6.67 - 21.05	21.05 - 46.67	29.73 - 42.11	7.69 - 21.05
Average	14.01	35.27	37.20	13.52
School A (1962)				
	Stars	Above Av.	Below Av.	Neglectees
Range	7.90 - 20.69	27.59 - 42.11	20.46 - 44.82	5.27 - 27.27
Average	14.28	34.42	37.01	14.28
School B				
	Stars	Above Av.	Below Av.	Neglectees
Range	5.88 - 12.50	37.50 - 47.62	35.48 - 48.85	4.64 - 16.13
Average	7.84	42.75	40.78	8.63

If the results for each sex, which are shown in Tables IV and V, are taken separately it is apparent that the percentage of boys at the extremes is consistently greater than is the case for girls. As Table IV shows, the boys' Star category for 1961 ranged from 10 per cent to 16.7 per cent with an average of 14.2 per cent, and in 1962 the range was from 9.5 per cent to 26.1 per cent with an average of 17.5 per cent. This contrasts with the girls' Star category which, in 1961, ranged from 7.1 per cent to 21.1 per cent with an average of 13.8 per cent and in 1962 from 5.6 per cent to 15.4 per cent with an average of 10.8 per cent, (Table V).

School B. Although the results of the sociometric test taken at School B show the same trends as those taken at School A, there occurs, in most classes, a regression towards the average. As has already been noted, the Above Average and Below Average categories contain approximately 11 per cent more of the cases than is the case at School A and so, of course, fewer cases are found at each extreme. However, taking the results of both sexes together, Table III, the distribution of cases between the extremes is approximately even - 7.8 per cent appearing as Stars and 8.6 per cent as Neglectees. Tables IV and V indicate that fewer girls received Star rating, ranging from 4.4 per cent to 14.3 per

cent with an average of 5 per cent, than did the boys, who ranged from 5 per cent to 17.6 per cent with an average of 10.3 per cent. This is again the case in the Neglectee category where fewer girls occur - a range from 4.4 per cent to 12.5 per cent with an average of 7.6 per cent compared with a range from 4.8 per cent to 20 per cent and an average of 9.6 per cent for the boys. Detailed results showing the percentages for each class and also for each sex within each class appear in Appendix C.

The data show trends which indicate that the socio-metric technique, as used in this study, has a measure of reliability amongst the same children within the same school. From the consistency of these trends it appears that the level of social maturity amongst girls is higher than amongst boys even at the Standard Two to Four age groups while by Form I the girls tend to spread their choices amongst a larger number of their fellows and so fewer Stars appear and the number of Neglectees is also reduced although not to the same extent. That this is a feature of social maturation rather than a sex characteristic is indicated by the similar regression towards the average in the results for the Form I boys compared with the results from School A in both 1961 and 1962.

The possibility that this lag in the boys' social development could be overcome by measures which would produce greater social awareness rather than a factor which can be expected to

TABLE IV

PERCENTAGE OF BOYS RATED IN EACH SOCIOMETRIC CATEGORY SHOWING RANGE
FOR CLASSES WITHIN EACH SCHOOL AND THE SCHOOL AVERAGE

School A (1961)

	Stars	Above Av.	Below Av.	Neglectees
Range	10.00 - 16.67	26.32 - 63.64	16.67 - 47.62	4.17 - 22.22
Average	14.16	37.17	34.51	14.16

School A (1962)

	Stars	Above Av.	Below Av.	Neglectees
Range	9.52 - 26.09	21.74 - 35.00	17.39 - 55.00	6.25 - 34.78
Average	17.50	28.75	38.75	15.00

School B

	Stars	Above Av.	Below Av.	Neglectees
Range	5.00 - 17.64	23.53 - 40.00	29.42 - 58.83	4.76 - 20.00
Average	10.29	33.83	46.33	9.55

TABLE V

PERCENTAGE OF GIRLS RATED IN EACH SOCIOMETRIC CATEGORY SHOWING RANGE
FOR CLASSES WITHIN EACH SCHOOL AND THE SCHOOL AVERAGE

School A (1961)

	Stars	Above Av.	Below Av.	Neglectees
Range	7.14 - 21.05	26.32 - 50.00	35.29 - 46.67	5.88 - 15.79
Average	13.83	32.98	40.43	12.76

School A (1962)

	Stars	Above Av.	Below Av.	Neglectees
Range	5.56 - 15.39	30.77 - 50.00	23.81 - 46.15	7.69 - 19.05
Average	10.81	40.54	35.14	13.51

School B

	Stars	Above Av.	Below Av.	Neglectees
Range	4.35 - 14.28	39.14 - 66.67	18.75 - 43.48	4.35 - 12.50
Average	5.05	52.94	34.45	7.56

follow a rigid maturational pattern will be discussed in the chapter summarizing the conclusions of this study.

A further measure of the reliability of the sociometric test used in this survey is obtained by a comparison between these results and those presented by Gronlund⁸ for Forty Sixth-Grade classes. The percentages attributed in Gronlund's study to each sociometric category for 'seating' and 'play' criteria, (also used in this survey) and the results for School A, whose senior classes are of the same level, are presented in the following table:-

	PERCENTAGE IN EACH SOCIOMETRIC CATEGORY				
	Star	Above Av.	Below Av.	Neglectee	Isolate
Seating	15	24	42	11	8
Play	11	29	45	8	7
School A*	14	35	37		14

These results are similar throughout except for the higher percentage of Isolate children in Gronlund's study as approximately one per cent of this survey was so classified and therefore the results for this category have been included with

⁸ Norman E. Gronlund, Sociometry in the Classroom. Harper and Brothers, New York, 1959. p.98.

* School A totals from Table II for each year, when rounded to whole numbers, give identical results.

those for the Neglectees.

Similar figures are shown by Gronlund in the same study in results for one criteria (seating companion) at the Seventh-Grade level, where a slight regression towards the mean is observed in his totals of 11 per cent as Stars and only 3 per cent as Isolates. This trend continues through to the College level in his data but it is in the Below Average section that his percentages increase whereas, in this survey both the Above Average and Below Average categories received the increased percentages as the extremes diminished.

Another indication of slightly different distributions is found in the percentage of pupils who had numbers of choices above and below the expected value with five choices being made. Gronlund shows, in a study of eighty-one classes ranging from Third-Grade to College level, that an average of 39 per cent received more than the expected value and 61 per cent received less than this value, and notes that:

This tendency for the distribution of sociometric choices to be positively skewed has been designated a sociodynamic law by Moreno (7). He indicates that the uneven distribution of sociometric choices is similar to the uneven distribution of wealth in a society. Thus, few are "sociometrically wealthy" but many are "sociometrically poor". 9

⁹Gronlund. Ibid. p.95

In this survey, however, 49 per cent of School A and 51 per cent of School B - a close correspondence - are found to be above the expected value. (Detailed results appear in Appendix).

That the 'sociodynamic law' is not apparent in this study does not invalidate the results obtained in it but does illustrate the necessity of drawing only tentative conclusions in the intangible field of interpersonal relationships.

Correlations Between Scores Obtained on Different Criteria

When considering the construction of the sociometric test for the purposes of this study the theoretical requirements outlined by Moreno and Gronlund were applied in the selection of criteria for choosing. To find the correlations between scores obtained using each of these criteria, the number of choices given to each child for each criterion was recorded and compared with the number of choices scored on each of the other two. A Pearson Product Moment formula was used to obtain the correlations presented in Tables VI and VII.

During the scoring of the sociometric test it appeared at times as though the children were tending to list their first five choices in the "seating companion" criterion and then make different choices for "play companion". This impression is not supported by Tables VI and VII where high intercorrelations are shown between all classes, and an average

range over the three criteria combined of from 7.0 to 7.6 choices made per person in the sociometric categories supports this latter view.

No trend is apparent in the correlations obtained between each pair of criteria. For the "seating companion" and "play companion" pairing the range of correlations for the girls' choices was from .639 to .968 while that for the boys' choices was from .769 to .926 - a somewhat narrower range. For the "seating companion"/"visit" pairing, the girls' range is from .721 to .964 while that of the boys, .682 to .945, is a broader range. "Play companion" and "visit" criteria again show the boys to have a slightly broader range than the girls, since the boys range from .563 to .988 whereas the girls range from .676 to .942. This supports the tendency shown in the "seating companion"/"visit" results but contrasts with that shown in the "seating companion"/"play companion" results. The Boys' results for the "play companion"/"visit" pairing also show the highest correlation, .988, and the lowest correlation, .563, obtained - again illustrating the lack of trend between the different criteria.

A comparison between the correlations of the various class levels shows that, at School A in the 1961 survey, the Standard 2 classes scores gave slightly lower correlations

TABLE VI
INTERCORRELATIONS BETWEEN SCORES
OBTAINED ON EACH OF THE THREE
SOCIOMETRIC CRITERIA
(BOYS)

School A (1961)

Class	Seat/Play	Seat/Visit	Play/Visit
Std. 4	.869	.945	.901
Std. 4	.769	.894	.988
Std. 3	.921	.922	.921
Std. 3/2	.892	.891	.844
Std. 2	.828	.682	.563
Std. 2	.863	.759	.776

School A (1962)

Class	Seat/Play	Seat/Visit	Play/Visit
Std. 4	.823	.943	.866
Std. 3/4	.844	.869	.742
Std. 3	.925	.942	.923
Std. 2	.827	.908	.800

School B

Stream	Seat/Play	Seat/Visit	Play/Visit
A	.861	.917	.779
B	.926	.783	.857
C	.715	.679	.627
C	.909	.913	.880
D	.875	.850	.776
D	.816	.895	.873
E	.846	.881	.863

TABLE VII
INTERCORRELATIONS BETWEEN SCORES
OBTAINED ON EACH OF THE THREE
SOCIOMETRIC CRITERIA
(GIRLS)

School A (1961)

Class	Seat/Play	Seat/Visit	Play/Visit
Std. 4	.814	.918	.835
Std. 4	.912	.824	.697
Std. 3	.917	.890	.902
Std. 3/2	.908	.861	.774
Std. 2	.786	.756	.756
Std. 2	.639	.721	.795

School A (1962)

Class	Seat/Play	Seat/Visit	Play/Visit
Std. 4	.812	.936	.942
Std. 3/4	.863	.736	.841
Std. 3	.878	.826	.726
Std. 2/3	.746	.803	.855

School B

Stream	Seat/Play	Seat/Visit	Play/Visit
A	.820	.791	.797
B	.669	.809	.718
C	.676	.744	.676
C	.804	.862	.763
D	.968	.964	.855
D	.886	.851	.780
E	.878	.943	.934

(ranging from .563 to .863) than did the Standard 3 and 4 classes which ranged from .697 to .988. This tendency could be tentatively supported by the results of the 1962 survey at School A when the range for the Standard 3 and 4 was from .736 to .943 but the correlations at School B in 1962, when a range of from .627 to .968 was obtained, suggest that the reliability of the criteria is not related to the class level within the classes studied in these surveys.

The absence of trends and the high intercorrelations shown support the conclusion that the criteria selected received valid responses and that they produced similar sociometric ratings. For general purposes in the classroom the use of only one criterion would appear to be sufficient for the judgment of social status.

V. STABILITY OF SOCIOMETRIC TEST RESULTS

Reliability Coefficients by Correlation of Choices

The twelve months interval between surveys provided opportunity to test the reliability of the sociometric test used in this study. Gronlund¹⁰ reported that in one of his own studies with Sixth-Grade children an average stability co-

¹⁰ Norman E. Gronlund, Sociometry in the Classroom. New York: Harper and Brothers, 1959. pp. 125 - 126.

efficient of .75, on a test/retest over a four month interval, was obtained and that Bjerstedt, in a similar study over the same period, found a coefficient of .82. A more extensive study by Bonney¹¹ found that at one yearly intervals over a four year period, stability coefficients ranged from .67 to .84 and that this was as stable as intelligence and achievement coefficients taken during the same period.

Reliability for the sociometric test in this survey was taken by using a Pearson Product Moment formula on the number of choices received on the original test in November/December 1961 and on the same test in November/December 1962. For the Standard Four classes these co-efficients cover the move into an entirely new social situation, the intermediate school. Regrouping of pupils had occurred in all other classes and so this is a particularly rigorous test of reliability in these cases.

Results presented in Table VIII show that the coefficients of reliability for Boys ranged from .52 to .80 and that

¹¹Merl E. Bonney, The Constancy of Sociometric Scores and their Relationship to Teacher Judgments and Social Success and to Personality Self Ratings, Sociometry 1943, 6:409-424.

those for the Girls ranged from .43¹² to .73. An average of all the coefficients obtained was .59 which is not as high as those found in the studies reported above but compares very favourably with a study by Laughlin in which he tested 525 Sixth-Grade children and on a retest a year later, when they had been regrouped in the Seventh-Grade, found a correlation coefficient of .55. Gronlund¹³ in reporting this study concludes that "This is a rather severe test of the constancy of sociometric status. Although a significant degree of relationship was indicated, there is little doubt that a larger correlation coefficient would have resulted if the interval between tests had been shorter".

Changes in Sociometric Classification after Twelve Months

As a correlation coefficient alone does not fully indicate the extent to which the actual sociometric status of pupils may change, since a difference of two or three

¹² Probably atypical result since it was obtained from a class of ten girls who had moved to the intermediate school.

¹³ Gronlund, op. cit., p.140.

TABLE VIII
 STABILITY COEFFICIENTS BY PEARSON PRODUCT MOMENT
 ON CHOICES OBTAINED ON A SOCIOMETRIC TEST/RETEST
 AFTER A TWELVE MONTHS' INTERVAL

Stability Coefficients

Class	Boys	Girls
Std. 1 and 2	.56	.73
Std. 2	.60	.59
Std. 2 and 3	.80	.53
Std. 3	.52	.61
Std. 4	.62	.58
Std. 4	.55	.43*

* Result taken from a class of ten girls who had moved to the intermediate school.

choices in the case of an outstandingly popular pupil would lower a correlation coefficient but still not affect his sociometric rating, a further examination of the data was made. It was considered to be of interest to note also the amount of movement between sociometric categories to investigate whether or not social status could be radically changed in a new social environment.

Two factors have influenced the grouping of results from this section. Standard Two and Three results have been totalled since pupils were still at the contributing school and so in approximately the same environment although they may have been regrouped into different classes. Children in the Standard Four classes, however, had been transferred to the intermediate school and since they were now mingled with children from three other contributing schools wider differences in status might be expected. Results have also been compiled for each sex.

Table IX shows the percentage of each sociometric category as they appeared on the retest. Thus, over all classes it is seen that 34.49 per cent of the Stars were still in that category after a twelve months interval, while, in contrast, 6.89 per cent had dropped to the Neglectee classification. Examination of these combined results for both sexes shows that the Above Average and Below Average categories had the highest

TABLE IX
CHANGES OF STATUS ON A SOCIOMETRIC RETEST
AFTER TWELVE MONTHS INTERVAL (ALL CASES)

Standard 2-3					
Status on Retest					
Status on Initial Test	Stars	Above Av.	Below Av.	Neglectees	
	Stars	42.11	36.84	21.05	-
	Above Av.	13.64	50.00	34.09	2.27
	Below Av.	2.17	39.13	39.13	19.57
	Neglectees	8.33	-	58.34	33.33
Standard 4					
Status on Retest					
Status on Initial Test	Stars	Above Av.	Below Av.	Neglectees	
	Stars	20.00	60.00	-	20.00
	Above Av.	10.00	45.00	40.00	5.00
	Below Av.	4.76	28.57	61.91	4.76
	Neglectees	-	16.67	33.33	50.00
All Classes					
Status on Retest					
Status on Initial Test	Stars	Above Av.	Below Av.	Neglectees	
	Stars	34.49	44.83	13.79	6.89
	Above Av.	12.50	48.43	35.94	3.13
	Below Av.	2.99	35.82	46.27	14.92
	Neglectees	4.17	8.33	54.17	33.33

percentages remaining within the same category on the retest - slightly under half in each case - while approximately one third of the extremes retained their same rating. These data illustrate the possibility of social mobility for children of all sociometric classifications.

The amount of movement between sociometric categories is more clearly illustrated in Table X which shows that a total of 46.15 per cent of the Boys and 42.39 per cent of the Girls did not alter their classification and that only isolated cases changed by more than two categories. Similar percentages appear throughout the table and so little difference is shown between Boys and Girls in the overall changes and surprisingly little difference between those who remained at the contributing school and those who moved to the intermediate. Presumably, any change of environment is likely to present the opportunity for social movement and such a finding is distinctly encouraging for pupils of low social status.

Almost half of all sections recorded changed status by one category either upwards or downwards from their original status, and approximately 5 per cent by two categories while an insignificant number changed by three categories either way. The importance of these last few lies not in the number who made such wide changes but in the illustration that extremely

TABLE X
CHANGES IN SOCIOMETRIC STATUS AFTER TWELVE MONTHS

BOYS

Movement Between Sociometric Categories

Class	+3	+2	+1	No Change	-1	-2	-3
Std. 2-3	1.49	1.49	23.88	47.77	22.39	2.98	-
Std. 4	-	5.41	18.92	43.24	24.32	5.41	2.70
Total	0.96	2.88	22.12	46.15	23.08	3.85	0.96

GIRLS

Movement Between Sociometric Categories

Class	+3	+2	+1	No Change	-1	-2	-3
Std. 2-3	-	-	25.40	42.85	25.40	4.76	1.59
Std. 4	-	3.45	24.14	41.38	27.58	-	3.45
Total	-	1.09	25.00	42.39	26.09	3.26	2.17

popular pupils in one situation may be unpopular in another and vice versa. The Isolate is not irrevocably condemned nor is the Star's status inviolable.

More detailed results for each sex are presented in Tables XI and XII, and these show differences between the distributions of the sexes which were not apparent in Table IX. At the Standard Two and Three level, Boys' Stars and Above Average cases tended to change less than the lower status children and only small percentages varied more than one category. The Boys who moved to the intermediate, however, show more widespread movement with the popular children tending to lose status and the unpopular children gaining through the transfer.

Girls in Standard Two and Three reflect their greatest stability in the Above Average section with wider variations for the Stars than for those of lower status since only the Stars moved by more than one category from their original classification. The girls who moved to the intermediate also show a depression in status for the Stars and Above Average groups but the remainder tend either to stay in the same category or rise slightly in status.

Summary. While the correlation coefficients indicate that the sociometric test is a reliable technique and that

TABLE XI
CHANGES OF STATUS ON A SOCIOMETRIC
RETEST AFTER TWELVE MONTHS INTERVAL (BOYS)

Standards 2-3				
Status on Retest				
Status on First Test	Stars	Above Av.	Below Av.	Neglectees
Stars	55.56	33.33	11.11	-
Above Av.	15.38	50.00	30.77	3.85
Below Av.	4.00	32.00	48.00	16.00
Neglectees	16.67	-	50.00	33.33
Standard 4				
Status on Retest				
Status on First Test	Stars	Above Av.	Below Av.	Neglectees
Stars	28.57	57.14	-	14.29
Above Av.	9.09	54.55	27.27	9.09
Below Av.	11.11	22.22	66.67	-
Neglectees	-	12.50	50.00	37.50
All Classes				
Status on Retest				
First Test	Stars	Above Av.	Below Av.	Neglectees
Stars	43.75	43.75	6.25	6.25
Above Av.	13.51	51.35	29.73	5.41
Below Av.	5.56	27.78	55.55	11.11
Neglectees	7.14	7.14	50.00	35.72

TABLE XII
CHANGES OF STATUS ON A SOCIOMETRIC RETEST
AFTER TWELVE MONTHS INTERVAL (GIRLS)

Standards 2-3				
Status on Retest				
	Stars	Above Av.	Below Av.	Neglectees
Status on Initial Test	Stars	30.00	40.00	30.00
	Above Av.	11.11	50.00	38.89
	Below Av.	-	47.62	28.57
	Neglectees	-	-	66.67
Standard 4				
Status on Retest				
	Stars	Above Av.	Below Av.	Neglectees
Status on Initial Test	Stars	-	66.67	-
	Above Av.	11.11	33.33	55.56
	Below Av.	-	33.33	58.34
	Neglectees	-	25.00	50.00
All Classes				
Status on Retest				
	Stars	Above Av.	Below Av.	Neglectees
Status on Initial Test	Stars	23.08	46.15	23.08
	Above Av.	11.11	44.45	44.44
	Below Av.	-	42.42	39.39
	Neglectees	-	10.00	60.00

status is sufficiently stable to permit the expectation that a large percentage of children will retain their status on a retest, the further examination of those who have changed categories indicates that considerable movement is possible. This suggests that teacher assessment of, and intervention in, the social situation within the classroom could bring beneficial results.

CHAPTER VI

TEACHER AWARENESS OF PUPILS' LEVELS OF PEER ACCEPTANCE

I. TEACHERS' ESTIMATION OF EACH CHILD'S

SOCIOMETRIC CATEGORY

To ascertain whether sociometric techniques are indeed necessary for the classroom teacher and to examine the possibility that teachers can already estimate popularity on the basis of their general experience, the teacher of each class participating in this study was asked to estimate the sociometric category in which each child in his class was placed.

A "Popularity Rating Scale" was provided for each teacher with the children in his class listed in alphabetical order. Definitions were presented for each sociometric category (See Appendix B) and the teachers were asked to check the category in which they estimated each pupil to be.

It was expected that teachers would be quite confident about the placement of some members of their class but that they would be uncertain of others. Results calculated on estimates of which teachers were uncertain could obviously lead to unjustified conclusions and so a "Confidence of Estimate"¹

¹In the test form this column was labelled "Level of Confidence Scale". The name has been changed in the presentation of results to avoid confusion with statistical terminology.

column was added alongside that for the sociometric estimate. Each teacher was asked to indicate whether his estimate was 'definite', 'probable' or 'uncertain' for each child rated and results have been calculated for each of these 'Confidence of Estimate' categories.

Since, however, the necessity for sociometric testing is under examination, ^{and} the fact ~~also~~ that teachers used the 'probable' and 'uncertain' columns appears to be some evidence in favour of its use, the total accuracy of teachers' estimates has been presented first and this is followed by results which take the teachers' "Confidence of Estimate" into consideration.

II. ACCURACY OF TEACHERS' ESTIMATES FOR ALL CHILDREN RATED

When the sociometric rating for each child was compared with the category in which the teacher had estimated him to be, it was found that teachers were able to place accurately only about one third of the cases. Results taken over the two years and including all classes (Table XIII) show that 36.19 per cent of the children were assessed accurately. Reference to the more detailed results presented separately for each sex (Table XIV) shows estimates ranging in accuracy from 29.5 per cent, for the Standard Two to Four Boys in 1962, to 41.56 per cent for the Standard Two to Four Girls in 1961. The remaining four sections however show a very close correspondence with the over-

TABLE XIII

TOTALS OF TEACHERS' ESTIMATES OF EACH CHILD'S SOCIOMETRIC

CATEGORY IN RELATION TO "CONFIDENCE OF ESTIMATE"

RATINGS

ALL ESTIMATES

	+2	+1	0	-1	-2	-3
Boys	2.97	18.81	35.31	32.35	9.57	0.99
Girls	1.49	12.26	37.17	37.44	11.52	1.12
Total	2.27	15.73	36.19	34.27	10.49	1.05

"DEFINITE"

Boys	1.71	23.08	38.46	30.77	5.98	-
Girls	2.00	16.00	36.00	33.00	13.00	-
Total	1.85	19.81	37.33	31.79	9.22	-

"PROBABLE"

Boys	3.38	17.57	34.46	35.13	8.78	0.68
Girls	1.47	11.11	37.05	38.52	10.38	1.47
Total	2.47	14.48	35.69	36.75	9.55	1.06

"UNCERTAIN"

Boys	5.26	10.53	28.95	26.32	23.68	5.26
Girls	-	5.88	41.17	38.25	11.76	2.94
Total	2.78	8.33	34.72	31.95	18.06	4.16

All figures are percentages

TABLE XIV
 ACCURACY OF TEACHERS' ESTIMATES OF EACH CHILD'S
 SOCIOMETRIC CATEGORY

1961 STANDARDS TWO - FOUR						
	+2	+1	0	-1	-2	-3
Boys	2.17	22.83	36.96	33.69	4.35	-
Girls	2.60	14.29	41.56	28.57	12.98	-
1962 STANDARDS TWO - FOUR						
	+2	+1	0	-1	-2	-3
Boys	1.28	20.52	29.50	29.50	16.67	2.53
Girls	1.35	8.11	36.49	43.24	9.46	1.35
1962 FORM I						
	+2	+1	0	-1	-2	-3
Boys	4.44	15.56	37.78	32.59	8.89	.74
Girls	.85	13.68	35.04	37.61	11.97	.85

All figures are percentages

all average and it would seem reasonable to accept this as a typical figure.

At first sight, an accuracy of only a little over one third of the total estimated appears to indicate a serious inability on the part of the teachers to judge sociometric status without some form of sociometric technique. Absolute accuracy of estimate, however, might not be expected owing to unfamiliarity with sociometric techniques and rating scales. Further, one mention, either additional or fewer, on a sociometric test could alter the classification of an individual and place him in a category either higher or lower than that in which he was actually estimated to be. In such marginal cases it would be unreasonable to expect teachers to estimate accurately and the misplacement of one sociometric category either way would probably have little practical significance.

If the misplacement were made from the Star category the child would be rated as Above Average and so still considered as reaching a very satisfactory standard of adjustment to his fellow pupils and possessing leadership potential while, at the other end of the scale, an isolate would actually be rated as a neglectee and so still be recognised

as needing some assistance to reach a more satisfactory level in interpersonal relationships. Marginal movement between the Above Average and the Below Average categories again possesses little practical significance since both appear to be satisfactory for personality development. A slightly different situation is encountered however in the over-estimation of Neglectees since this would place them apart from those needing further consideration and so for this small percentage of cases alone a case could be made for the use of sociometric tests.

With the recognition that a misplacement of one sociometric category above or below the pupils actual status would not, in most cases, affect any programme of action the teachers' estimates will be considered including this as an allowable range of inaccuracy. Estimates falling within this broader range account for an average of 86.19 per cent of all pupils and, while the Standard Two to Four Boys in 1962 show an accuracy of 79.52 per cent against the same class's rating in 1961 of 93.48 per cent, the remaining sections conform closely to the average.

For the general practical purposes of classroom teaching the above results indicate that teachers can estimate with considerable accuracy, without the use of sociometric

techniques the relative degrees of their children's adjustment in inter-personal relationships:

Upon further examination, however, it must be noted that even allowing for the inaccuracy of one sociometric category above and below the pupil's actual status an average of over 13 per cent of the children have still not been accurately placed and that, in fact, two or three pupils in each class have been considerably underestimated or overestimated.

More detailed consideration must be given to this remaining 13 per cent since it is to this small minority that the use of sociometry in the classroom could bring the greatest benefits. On examination of the extreme of inaccuracy, the underestimation by three sociometric categories, it was found that only five cases were included in this category but that three of these occurred within one class. Each of the three (two boys and one girl) was rated as a Neglectee when, in fact these were the only children in the class who warranted Star ratings. For this teacher, sociometry could have added considerably to the insight, into the children's relationships, already obtained by observation. The other cases occurred in classes where the teachers showed much higher levels of awareness of social relationships and yet

again two Stars (both girls) had been rated as Neglectees. Since one of these was a pupil of the highest ability group this represents a loss of leadership potential which should have been utilized by the time of the year in which the survey was carried out.

In Table XIII, 10.49 per cent of children are shown as being underestimated by two sociometric categories - a further illustration of the failure to recognize children who possess the characteristics which make for good social adjustment and also a possible indication of misplaced sympathy on the part of the teachers.

Perhaps of more specific concern for satisfactory personality development is the much smaller percentage which was overestimated by two sociometric categories. Only 2.27 per cent of children were so placed but of these, five cases were estimated to be Average when they were actually Isolates and two cases were estimated to be Above Average when they were Neglectees. If sociometry made teachers aware only of the problems of these children it would justify its use in the classroom since, small though the percentage may be, these are the children who, although they, on the surface, appear to be satisfactorily adjusted to their classmates, are really in need of any assistance which can be offered to

develop social relationships.

No consistent differences are apparent in the results for the two sexes and so it is concluded that neither sex is easier to estimate than the other.

III. ACCURACY OF TEACHERS' ESTIMATES IN RELATION TO THE "CONFIDENCE OF ESTIMATE SCALE"

When a "Confidence of Estimate" scale was included to check whether the teachers were sure or uncertain of the accuracy of their estimates it was envisaged that the "Definite" column would be most used, that the marginal cases would be checked as "Probable" and that very few cases would be sufficiently unknown to be checked as "Uncertain". Two teachers did check in this fashion but the remainder were either unsure of their children's relationships or unwilling to commit themselves to a checking of the "Definite" column for a large percentage of their estimates. That the expected pattern did not emerge is clearly shown in these results:

	Definite	Probable	Uncertain *
Boys	39.39	48.86	11.75
Girls	38.98	45.76	15.26
Total	39.20	47.40	13.40

This reluctance to be definite about 60 per cent of

* All figures are percentages.

the class, and to be uncertain of 13 per cent, again reflects the teachers' insufficient awareness of the social factors operating within their own classrooms.

Since such caution in assessment was shown by the teachers it might be expected that the ratings for each of the "Confidence of Estimate" categories would be considerably different from the average results. That this is not the case is shown by comparing the results presented in Table XIII. Considering only the average results for each section a trend is shown in the expected direction but it is not a marked deviation from the average as the "Definite" average is only 1.14 per cent better than the overall average and the "Uncertain" results are only 1.33 per cent less accurate than this figure.

When the broader range of error (one sociometric category above or below the accurate placing) is allowed to give a comparison with the results already presented it is found that the "Definite" and "Probable" results are 88.93 per cent and 86.92 per cent respectively compared with the overall average of 86.19 per cent - a very small difference. For those rated as "Uncertain" the figure 75 per cent does show a more definite trend in the expected direction, but this is not as low as might be expected from the most

uncertain estimates. It seems, then, that without a more objective method of assessing sociometric status teachers can be confidently mis-placing the pupils within their classes.

IV. TEACHING EXPERIENCE AS A FACTOR IN ACCURATE ESTIMATION

Since the classes tested contained three young teachers (two women and one man) completing their probationary year before certification, it was possible to compare their estimates with those of the other teachers who had from six to nineteen years teaching experience.

In attempting a prediction of results two conflicting viewpoints arose. Initially it was considered that the probationary assistants would be less accurate in estimating sociometric status since their experience was limited to one class and a certain preoccupation with subject content and class administration would be understandable at that stage of their careers. It is possible however, that because of their inexperience they might be more acutely aware of the children in their class as personalities whereas a more experienced teacher might tend to be oriented more towards the achievement of academic results. Further, as the probationary assistants are expected to teach a class of approximately only three-quarters of the size of that of

the qualified teacher this also is a factor in their favour.

In considering the results obtained by the probationary assistants, an attempt was made to compare their results with others from a similar situation. Classes were matched for standard level and the sex of the teachers. At the contributing school this allowed comparison between the probationary assistant and one other class in each year while at the intermediate three classes were compared with that of the probationary assistant.

Table XV shows that the three probationary assistants followed the average trend and tended to underestimate their pupils' sociometric status but to a greater extent than the teachers who had had more experience. The two probationary assistants at the contributing school both had a narrower range of error than their comparable teacher because of the tendency to underestimate and the percentages which they assessed accurately compared favourably with those of the other teachers. At the intermediate, the probationary assistant's ratings show a very similar pattern and standard of accuracy to those of the other teachers compared.

The male probationary assistant estimated the boys in his class slightly more accurately than his comparable teacher and considerably more accurately than the two female probationary

TABLE XV

ACCURACY OF TEACHERS' ESTIMATION OF EACH CHILD'S SOCIOMETRIC
STATUS: A COMPARISON BETWEEN PROBATIONARY ASSISTANTS AND OTHER

TEACHERS

Stds. 2 - 4 (1961) Boys					
	+2	+1	Accurate	-1	-2
P.A.(F)	-	27.27	18.18	54.55	- *
Others (1)	-	42.10	31.58	26.32	-
Stds. 2 - 4 (1961) Girls					
	+2	+1	Accurate	-1	-2
P.A.(F)	-	-	60.00	26.67	13.33
Others (1)	10.53	26.32	47.36	15.79	-
Stds. 2 - 4 (1962) Boys					
	+2	+1	Accurate	-1	-2
P.A.(M)	-	6.25	43.75	50.00	-
Others (1)	-	28.57	52.38	4.76	14.29
Stds. 2 - 4 (1962) Girls					
	+2	+1	Accurate	-1	-2
P.A.(M)	-	15.38	46.15	30.78	7.69
Others (1)	-	13.63	45.46	40.91	-
Form I Boys					
	+2	+1	Accurate	-1	-2
P.A.(F)	5.88	11.77	29.41	47.06	5.88
Others (3)	5.45	18.19	46.37	20.00	9.09
Form I Girls					
	+2	+1	Accurate	-1	-2
P.A.(F)	-	12.50	43.75	37.50	6.25
Others (3)	-	12.00	38.00	40.00	10.00

* All figures are percentages

assistants. All the probationary assistants were more accurate in the assessment of the girls in their classes than the teachers with whom they were being compared.

While the number of cases precludes any valid conclusions being drawn from these results, it does not appear that additional years of experience alone contribute to the ability to assess sociometric status.

V. A COMPARISON BETWEEN THE RESULTS FOR MEN AND WOMEN TEACHERS

Separate results have been calculated for men and women teachers to ascertain whether the sex of the teacher affected his or her judgement of the pupil's sociometric status. Table XVI shows a very close parallel between the total results obtained for each sex with less than three per cent difference in any one accuracy category. Allowing an error of one category above or below the accurate estimate shows that the men teachers included 87.5 per cent of their classes within this range while the women teachers included 84.89 per cent - a difference of only 2.61 per cent.

Comparison between the sex of the teacher estimating and the same sex and opposite sex pupils again reveals no large differences. Men teachers were slightly more accurate at estimating boys than girls, averaging 6.91 per cent more accurately placed, and showed a tendency to underestimate girls to a

TABLE XVI

TOTALS OF TEACHERS' ESTIMATES OF EACH CHILD'S SOCIOMETRIC

CATEGORY: SEPARATE RESULTS FOR MEN AND WOMEN TEACHERS

MEN TEACHERS' ESTIMATES

	+2	+1	0	-1	-2	-3
Boys	3.33	13.33	40.84	35.83	6.67	-
Girls	0.90	14.28	33.93	36.61	12.50	1.78
Total	2.15	13.79	37.50	36.21	9.49	0.86

WOMEN TEACHERS' ESTIMATES

	+2	+1	0	-1	-2	-3
Boys	3.40	19.86	34.64	28.50	12.24	1.36
Girls	2.28	12.99	34.36	39.68	9.92	0.77
Total	2.88	16.54	34.54	33.81	11.15	1.08

All figures are percentages

greater degree - 14.24 per cent being misplaced by more than one category against 6.67 per cent for the boys. No boys were underestimated by more than two categories but 1.78 per cent of the girls were so placed. When these results are compared with those for the women teachers it is found that they also tend to underestimate girls but usually by only one category. A comparison between the totals however shows that men teachers underestimated 50.89 per cent of the girls and that the women teachers produced a parallel figure of 50.37 per cent - an extremely close correspondence. Women teachers estimated both sexes almost equally accurately but tended to both overestimate and underestimate boys slightly more than girls.*

Although the differences are slight, the trends noted tend to support the expectation that teachers show more awareness of the status of pupils of the same sex as themselves.

Summary. From the data presented, it is apparent that most teachers are aware of the interpersonal relationships of children and can estimate broad sociometric categories with a high degree of accuracy for the majority of their pupils. More closely defined placement however shows a drop in accuracy to a level which must be considered inadequate and

* Results by class levels are included in the Appendix

the major misplacement of a small percentage of cases reflects a similar inadequacy. Two aspects thus indicate a need, in the classes studied, for an accurate means of assessment.

VI. THE TEACHERS' ESTIMATION OF THE POPULARITY RANKINGS OF PUPILS

Although the previous section has indicated that sociometric techniques could make teachers more accurately aware of the social situation within their classes, unfamiliarity with sociometric classifications and distribution of cases may have caused some of the error noted. To investigate this possibility the teachers involved in this survey were asked to complete the ranking form entitled "Which People Have the Most Friends in Your Class?" which had been designed for use with the pupils. This form was a simple ranking list which did not presuppose any knowledge of sociometry but which was intended to elicit a rank order of the members of the class. An absolute ranking was not expected and so the list of names was divided into two equal sections.

Since it was considered desirable to conduct this study using a positive emphasis, the scale asked both teachers and pupils to estimate only the most popular members of the class. It was felt that teachers should be aware of which children are particularly popular with their fellow pupils and to test this

awareness the teacher of each class was asked to estimate which five boys, in his own class, had received the highest number of choices on the sociometric test and which five girls were so rated. A high accuracy rate was expected in these estimates since these children represent the major leadership potential in the class and at the stage of the year at which the tests were taken (November/December) should have been utilized in situations where their efficiency would have reflected, to some extent, their popularity amongst their classmates.

As a check upon the previous estimates, the teachers were also asked to rank the next five most popular of each sex thus giving a ranking of the ten most popular boys and the ten most popular girls in each class. Again a high accuracy level was expected since the additional five estimates should tend to cover the inaccuracies of the previous ratings. At the same time, it is realized that in ranking the final members of the first ten, the margins separating those actually in this category and those who rank slightly lower could be considerably reduced and so a measure of inaccuracy could be expected. A low percentage of accuracy would mean that members of each sex from the more unpopular children of the class were being included and such inaccuracy could be interpreted as an inadequate level of knowledge of the social

structure of the class and so would tend to support the findings of the previous section.

Standards Two to Four. The results of the "Which People Have the Most Friends in your Class?" ranking scale show a wide variation between class levels, between the sexes and between men and women teachers.

In 1961, the Standards Two to Four teachers had an average accuracy of 76.67 per cent for the Five Most Popular Boys and 83.33 per cent for the Five Most Popular Girls. (Table XVII). The estimation of the ten most popular of each sex in these classes raised the average to 88 per cent in the case of the boys but a drop of 7.33 per cent was recorded for the girls. The following year, in 1962, the percentage for both boys and girls fell by from 23.33 per cent to 31.67 per cent except in the case of the Ten Most Popular Girls where the average rose by 4 per cent to be comparable with the results of the previous year.

With the exception of the Boys' Ten Most Popular estimate in 1962, where an average of 45 per cent was obtained all the total percentages for the Standard Two to Four section appear to reflect a fairly high degree of accuracy when the intangibility of personal relationships and the multiplicity of factors are considered.

TABLE XVII

PERCENTAGE OF ACCURACY WITH WHICH TEACHERS ESTIMATED THE
FIVE MOST POPULAR BOYS AND GIRLS AND THE TEN MOST
POPULAR BOYS AND GIRLS IN THEIR OWN CLASSES

STANDARDS TWO - FOUR (1961)

	Boys		Girls	
	5	10	5	10
Teachers				
Men	80.00	90.00	90.00	73.33*
Women	70.00	80.00*	70.00	80.00
Total	76.67	88.00	83.33	76.00

STANDARDS TWO - FOUR (1962)

	Boys		Girls	
	5	10	5	10
Teachers				
Men	60.00	55.00	80.00	90.00*
Women	30.00	65.00	40.00	75.00
Total	45.00	60.00	60.00	80.00

FORM I (1962)

	Boys		Girls	
	5	10	5	10
Teachers				
Men	33.33	60.00	60.00	70.00
Women	53.33	73.33	53.33	70.00
Total	43.33	66.67	56.67	70.00

PROBATIONARY ASSISTANTS

	Boys		Girls	
	5	10	5	10
	53.33	80.00*	43.33	75.00*

* 1 Class omitted owing to small number of cases.

Form One. When comparing the overall results, Table XVII shows that, in both years, the Standard Two to Four teachers returned higher averages, in almost all sections, than did the intermediate classes. 43.33 per cent for the Five Most Popular Boys and 56.67 per cent for the Girls are considerably less accurate estimates than those obtained by the Standard Two to Four teachers in 1961 but correspond closely with the Standard Two to Four teachers' results in 1962. Further, in the estimation of the Ten Most Popular Boys and Girls a respective rise of 6.67 per cent and drop of 10 per cent, in relation to the 1962 figures, was recorded.

The results for 1962, for both contributing and intermediate schools are comparable throughout and may represent a more realistic expectation of error than those for 1961 which appear unduly high although no explanation for this has been discovered.

Sex Differences. In analyzing the different results for each sex the data show consistent comparisons, again with the exception of the 1961 Standard Two to Four Girls' Ten Most Popular, which indicate that teachers are more successful in estimating the ranking of girls than that of boys. When rating the Five Most Popular, the Girls were ranked between 6.66 per cent and 15 per cent more accurately than the Boys. Although this result differs from that obtained in

the Teachers' Estimation of Sociometric Status where no consistent difference was found in the estimation of the sexes, both could still be valid findings. In the latter estimate the teachers were concerned with pupils in all sociometric categories whereas the ranking of the Ten Most Popular would involve only Star and Above Average pupils. The difference in results may be explained by the postulate that the Star and Above Average Girls are easier to estimate than the Star and Above Average Boys but that these differences are averaged out in an increasing difficulty in the estimation of lower status girls. Some support for this view is obtained from the relationship shown between the teachers' assessment of behaviour and the child's sociometric status - the results for which are included at the end of this section.

The results in Table XVII also allow comparisons to be made between teachers' ratings of pupils of their own and the opposite sex. In the ranking of the Five Most Popular Boys, the men teachers' estimates were from 10 per cent to 30 per cent more accurate than those of the women teachers in the Standard Two to Four classes but were 20 per cent less accurate with the Form I boys. Similar figures are found in the estimation of the Ten Most Popular Boys although within a narrower range. The women teachers were

more accurate in estimating the Standard Two to Four Boys in 1962 but in the other two results the men were more accurate by 10 per cent and 6.67 per cent.

In the Girls' Five Most Popular scores, men teachers showed greater accuracy than the women by 20 per cent and 40 per cent respectively for 1961 and 1962 Standard Two to Four Classes but showed a difference of only 6.67 per cent with the intermediate girls. A more variable result is noted in the ranking of the Ten Most Popular Girls where in the Standard Two to Four scores the women were more accurate by 6.67 per cent in 1961 but the men were more accurate by 15 per cent in 1962. Both sexes recorded the same percentage for the intermediate girls. As these results tend to cancel each other out it is concluded, from this data, that the sex of the teacher is not an important factor in their estimation of children's popularity.

Teaching Experience as a Factor. For the purposes of comparison with the results from the "Teachers' Estimation of Each Child's Sociometric Category", which considered experience as a factor in the accuracy of popularity estimation, a section in Table XVII shows the combined results recorded by the Probationary Assistants. Their percentages compare favourably with the overall results being within the

range of the averages in all cases except for the rating of the Five Most Popular Girls. Here however, their score is 13.34 per cent below the lowest of the sectional averages but is still over 3 per cent higher than the Women Teachers' estimation of the Standard Two to Four Girls in 1962. These data support the previous finding that teaching experience alone does not increase the awareness of pupils' popularity.

Summary. While wide variations have been noted in the ability to estimate which children rate most highly in popularity, data showed that teachers can judge the Five Most Popular of each sex with approximately 60 per cent accuracy and the Ten Most Popular of each sex approximately 73 per cent accurately. Although these are higher percentages than those gained with the "Estimation of Each Child's Sociometric Category" they still suggest the need for a more objective method of assessing social relationships than unaided observation.

CHAPTER VII

PUPILS' AWARENESS OF PEER POPULARITY

Rationale and Administration of the Test. Among the formal and informal socializing influences which impinge upon the child at school, conscious imitation of admired individuals is probably of major importance. Part of this study has endeavoured to discern which characteristics, from the child's viewpoint, make a person a desirable friend. The thesis was propounded that the children who could recognize the most popular personalities within their own class would be imitating acceptable characteristics and so would themselves be more likely to increase in social acceptance. Conversely, those children who were unable to distinguish which individuals were acceptable or unacceptable to the majority would, since their models' behaviour traits might be inadequate by peer standards, tend to be less popular.

To test the awareness of the social status of individuals within the class, the children were asked to rank the most popular children. Having taken the sociometric test a day or so previously the experimenter explained that on that test some children had received a larger number of choices than others. The class was then asked to judge which five children, of each sex, received the greatest number of choices. To ensure

concentration upon the outstandingly popular it was not until after this rating had been completed that the class was asked to judge who were the next five children to receive large numbers of choices. Each sex was asked to rate the opposite sex in the same manner.

The test form "Which People Have the Most Friends in Your Class?" (Appendix B) also contained these instructions.

Scoring. In scoring the test results, rankings of the Five Most Popular and the Ten Most Popular were considered separately. The accuracy percentage for each child was obtained, totalled according to the sociometric status of each and an average percentage of accuracy for each sociometric category calculated. Separate results are presented for each sex, for the two testing periods at the contributing school and also for the intermediate school.

Boys' Results. In both schools over the two testing periods, the Boys' total results (Table XVIII) show comparable ability in estimating the popular boys and girls. Percentages with a range of only 6.76 per cent cover the estimation of the Five Most Popular Boys and a similar range of 6.83 per cent is noted for the Five Most Popular Girls. The highest total estimates in each case, 52.25 per cent for the Boys and 54.77 per cent for the Girls, is considerably lower than expected.

TABLE XVIII

PERCENTAGE OF ACCURACY WITH WHICH BOYS ESTIMATED THE
FIVE MOST POPULAR BOYS AND GIRLS AND THE TEN MOST
POPULAR BOYS AND GIRLS IN THEIR OWN CLASSES

STANDARDS TWO - FOUR (1961)

Sociometric Category	Boys		Girls	
	5	10	5	10
Stars	57.50	71.88	55.50	73.57
Above Av.	52.86	69.14	54.29	68.85
Below Av.	46.60	64.54	51.28	72.00
Neg. + Iso.	50.77	69.16	64.64	66.00
Total	52.25	68.70	54.77	68.18

STANDARDS TWO - FOUR (1962)

Sociometric Category	Boys		Girls	
	5	10	5	10
Stars	50.00	70.00	52.14	66.43
Above Av.	51.30	64.35	53.43	66.52
Below Av.	45.81	61.29	46.45	58.06
Neg. + Iso.	38.33	65.00	41.67	69.17
Total	46.34	64.15	48.54	63.54

FORM I (1962)

Sociometric Category	Boys		Girls	
	5	10	5	10
Stars	52.31	63.08	58.46	51.43
Above Av.	47.27	57.50	51.82	57.39
Below Av.	44.84	57.42	41.93	52.50
Neg. + Iso.	34.17	56.67	53.33	48.33
Total	45.49	57.17	47.94	53.61

The estimations of the Ten Most Popular Boys show increases in accuracy of 16.45 per cent for the Standards Two to Four classes in 1961, 17.81 per cent in 1962 and 11.68 per cent for the intermediate classes. Similar results are obtained for the Ten Most Popular Girls in the Standard Two to Four classes where increases of 13.41 per cent in 1961 and 15 per cent in 1962 are found but a much smaller increase of only 5.67 per cent is seen in the intermediate classes, although the 53.61 per cent total for this section does correspond to the 57.17 per cent for the parallel Boys' result.

The average percentages obtained for each sociometric category show some evidence to support the thesis being tested but also show conflicting elements. In 1962 the results for the Five Most Popular Boys show the expected trend although the Above Average section for the contributing school in 1962 is slightly higher than the Star section. The fact that Stars were 11.67 per cent more accurate at the Standard Two to Four level and 18.14 per cent more accurate at the intermediate level does support the thesis outlined. In the 1961 result, however, the Neglectee and Isolate category, although less accurate than the Star and Above Average pupils, are 4.17 per cent more accurate than the Below Average.

This result is repeated in the ranking of the Ten Most Popular Boys in both surveys at the contributing school but not at the intermediate where the expected trend occurred.

The Boys' estimation of the Five Most Popular Girls follows the same pattern. While there is an overall decrease in accuracy matching the decrease in social status the expected trend is shown completely only in the Standard Two to Four section for 1962. In the result for the intermediate classes the Neglectees and Isolates were more accurate than all except the Star category while in 1961 the Neglectees and Isolates attained the highest average by a margin of 11.14 per cent. The percentages in the ranking of the Ten Most Popular Girls vary considerably and no trends are apparent.

Girls' Results. Over all results for the estimation of their own sex the Girls totals (Table XIX) show a large measure of concordance ranging from 52.10 per cent to 57.05 per cent in the estimation of the Five Most Popular and 61.69 to 68.02 per cent for the Ten Most Popular. The trend of decreasing accuracy with decreasing status is not apparent although the Neglectee and Isolate percentage is, in four sections, a range of from 6.66 per cent to 29.17 per cent lower than that of the comparable Stars. In one of the

TABLE XIX

PERCENTAGE OF ACCURACY WITH WHICH GIRLS ESTIMATED THE
FIVE MOST POPULAR BOYS AND GIRLS AND THE TEN MOST
POPULAR BOYS AND GIRLS IN THEIR OWN CLASSES
STANDARDS TWO - FOUR (1961)

Sociometric Category	Boys		Girls	
	5	10	5	10
Stars	47.69	67.69	61.54	66.92
Above Av.	54.00	74.00	57.33	73.20
Below Av.	48.65	66.13	57.84	62.97
Neg. + Iso.	46.00	65.00	50.00	73.33
Total	49.63	66.92	57.05	68.02

STANDARDS TWO - FOUR (1962)

Sociometric Category	Boys		Girls	
	5	10	5	10
Stars	50.00	63.75	52.50	73.75
Above Av.	42.00	65.00	53.33	68.00
Below Av.	33.85	59.62	54.62	64.61
Neg. + Iso.	32.00	54.00	52.00	63.00
Total	38.42	60.39	53.95	66.84

FORM I (1962)

Sociometric Category	Boys		Girls	
	5	10	5	10
Stars	33.33	63.33	53.33	72.50
Above Av.	38.09	57.46	51.74	61.36
Below Av.	37.07	55.61	53.66	62.41
Neg. + Iso.	28.89	48.89	46.67	53.33
Total	37.65	56.47	52.10	61.69

remaining two sections the extremes show a difference of only .5 per cent while in the other the Neglectee and Isolate category is 6.41 per cent more accurate than the Star category.

The Girls' ranking of the Five Most Popular Boys and the Ten Most Popular Boys showed an overall trend but with several exceptions. In all cases, however, the Stars were more accurate than the other extreme.

In contrast to the Boys who showed equal ability in assessing their own and the opposite sex, averaging approximately 2 per cent higher for the Girls, the Girls in general tended to be more accurate in rating their own sex. This is particularly noted in the estimation of the Five Most Popular where their Girls ranking averaged 9.14 per cent higher than their ranking for the Boys.

Comparison of Children's and Teachers' Rankings. A comparison of the totals of the Boys' and Girls' rankings with those of the Teachers (Tables XVII), using the Teachers' 1962 totals only since the 1961 totals appeared unduly high, shows similar percentages throughout. The Boys' and Girls' total estimates of the Five Most Popular Boys showed a range from 37.65 per cent to 52.25 per cent compared with the Teachers' scores of 43.33 per cent and 45 per cent. For the Five Most Popular Girls, the children ranged from 47.94 per cent to 57.05 per cent compared with the Teachers' 56.67 per

cent and 60 per cent. In the assessment of the Ten Most Popular Boys the Children's range from 56.47 to 68.70 covers the Teachers' 60 per cent and 66.67 per cent while the children's ratings of the Ten Most Popular Girls ranged from 53.61 per cent to 68.18 per cent against the Teachers' 70 per cent and 80 per cent totals. In all cases this represents a close correspondence.

Summary. While the trends shown in the data do, to some extent, support the thesis that more popular children can assess with greater accuracy which others rank most highly in social status within their own class this must be held, on the basis of these results, to be only a minor factor in the formation of an acceptable personality. Neglectees and Isolates in some sections scored highly and it seems possible that these people are equally aware of which others are the most popular and thus, presumably, can recognize the characteristics which promote acceptance. That they themselves do not adopt these characteristics is apparently due to more important factors of personality development.

CHAPTER VIII

THE RELATIONSHIP BETWEEN PUPIL BEHAVIOUR AND SOCIAL STATUS

I. THE ANALYSIS OF PUPIL BEHAVIOUR

The Behaviour Rating Scale. The ranking of pupils according to sociometric criteria presents the teacher with a social picture of his class from the children's viewpoint. Peer standards form the basis for ranking rather than those imposed by the teacher himself. Traditionally, in fiction at least, the pupil who rebels against authority is regarded favourably by his colleagues, but from observation in the classroom, the experimenter has formed the opinion that the children who are most favoured by their peers are those whose classroom behaviour is of a high standard.

To examine the relationship between a pupil's behaviour in school and his social acceptance, the teachers were asked to complete, in alphabetical order, a "Behaviour Rating Scale" (Appendix B). Three major sections were included based upon the measure of noisiness and general disturbance to the class of each pupil. Definitions were supplied (Appendix B) for these sections which were labelled 'Problem', 'Normal' and 'Quiet'. Subdivision of each column into two enabled a further rating to be made at the same time to show whether the level of disturbance was of an antisocial nature or merely of a type which, in

the teacher's opinion, was consistent with social acceptance by the child's peers.

Presentation of Results. Overall results will be presented first but an analysis has also been made to investigate the possibilities that the sex of the teacher and the level of the class being rated might be relevant factors in the estimation of behaviour.

Reviewing the results leads to the conclusion that teachers considered both the Normal/Sociable rating and the Quiet/Sociable rating as being desirable since the largest number of cases fell into one or other of these categories. The percentages in each of these categories will, of course, vary according to the standard of behaviour expected by each teacher but the information being sought lies in the distribution of atypical ratings, especially about those children who were designated as antisocial by the teacher.

Results for All Teachers and All Classes. Total results for all children (Table XX) show 51.98 per cent as Normal and Sociable and a further 28.82 per cent as Quiet and Sociable. The smallest percentage, 3.27 per cent, occurs in the Quiet and Antisocial group while approximately 6 per cent is found in each other category.

Examination of the percentage within each sociometric category shows considerable differences in the distribution of

TABLE XX

TEACHERS' ASSESSMENTS OF ALL CHILDREN'S BEHAVIOUR RATING
SHOWING PERCENTAGES IN EACH SOCIOMETRIC CATEGORY

BOYS

Sociometric Category	Problem		Normal		Quiet	
	Soc	Anti	Soc	Anti	Soc	Anti
Star	5.12	2.56	56.43	10.24	25.65	-
Above Av.	6.54	5.61	62.62	5.61	17.75	1.87
Below Av.	10.57	7.32	47.15	8.94	23.58	2.44
Neg + Iso.	-	15.00	27.50	20.00	30.00	7.50
Total	7.12	7.12	51.13	9.39	22.65	2.59

GIRLS

Star	-	-	66.67	-	33.33	-
Above Av.	3.70	0.93	63.89	0.93	30.55	-
Below Av.	8.49	7.55	44.34	6.60	27.36	5.66
Neg + Iso.	-	6.45	32.26	16.13	29.03	16.13
Total	4.78	4.04	52.94	4.78	29.40	4.04

ALL CHILDREN

Star	3.03	1.52	60.61	6.06	28.78	-
Above Av.	5.12	3.27	63.27	3.27	24.14	0.93
Below Av.	9.62	7.39	45.86	7.86	25.34	3.93
Neg + Iso.	-	11.27	29.58	18.30	29.58	11.27
Total	6.02	5.68	51.98	7.23	25.82	3.27

ratings. Considering the Normal/Sociable group, a distinct trend is seen from the Stars to the Neglectees and Isolates, 60.61 per cent of Stars being so rated against only 29.58 per cent of Neglectees and Isolates. The reverse of this trend is shown in the Problem/Antisocial and the Quiet/Antisocial groups but not in the Normal/Antisocial where surprisingly 6.06 per cent of Stars received this rating. The remaining sociometric categories in the Normal/Antisocial column do, however, reflect this trend and the 18.3 per cent recorded by the Neglectees and Isolates is the highest percentage attributed to any of the Antisocial columns.

Analysis of the sociometric categories shows that 89.39 per cent of the Stars were placed in either the Normal/Sociable or the Quiet/Sociable ratings while a further 3.03 per cent were assessed as Problems but Sociable. The remaining 7.58 per cent were considered, by the teachers to be unsociable. This discrepancy between the ratings of teachers and pupils illustrates the difficulties of obtaining valid results in such intangible areas as social acceptability. Presumably these differences are caused by nuances of personality noticeable to the children which, in spite of overt behaviour more characteristic of those of low social status, are favourable factors in the social situation.

The Above Average category shows percentages of distribution similar to the Stars, with 87.41 per cent rated as Normal/Sociable or Quiet/Sociable and an increase of 2.9 per cent rated as Problem/Sociable. The percentage for the Problem/Antisocial has doubled but that for the Normal/Antisocial has fallen by approximately half, this last being a reversal of the expected trend, while .93 per cent were considered to be Quiet and Antisocial.

More marked differences are apparent in the results for the Below Average pupils. Here, only 45.86 per cent were found to be Normal/Sociable compared with over 60 per cent in both the more socially acceptable categories. Only 71.2 per cent now appear in a combination of the Normal/Sociable and the Quiet/Sociable ratings - a drop of 16.21 per cent from the previous level. In the Antisocial columns 19.18 per cent occur, compared with 7.47 per cent of the Above Average and 7.58 per cent of Star pupils - mainly divided between the Normal and Problem children but considerably increasing in the Quiet group also.

Neglectee and Isolate pupils complete the trends so far shown with two exceptions. Now, as expected, only 59.16 per cent are rated Normal/Sociable or Quiet/Sociable while the remaining 40.84 per cent are all considered to be antisocial, these being approximately evenly distributed amongst the three

behaviour columns. The two exceptions are shown in the Quiet/Sociable, where no trend is apparent throughout the table and percentages ranged only from 24.14 per cent to 29.58 per cent, and also in the Problem/Sociable rating where no Neglectees or Isolates occurred. Had the previous trend in the table continued, approximately 15 per cent should have been found in this category. That this is not so indicates a different type of 'Problem' behaviour from that of the other status levels.

The data indicate that teachers consider Normal and Quiet behaviour acceptable and experience some Problem behaviour from pupils from all sociometric categories but decreasing with an increase in social status. Teachers' ratings of those who are antisocial agree with the sociometric status accorded in the children's choices but it is noticeable that an increase in Problem behaviour does not extend to the Neglectee and Isolate children as might be expected. Rather, an increase is found in the percentage of such children who are rated as Antisocial but Quiet. It is this section of the class which is most likely to contain those children who, lacking the personality traits to establish rapport with their fellows, have largely withdrawn from social contact. Perhaps these are the individuals who are socially neglected by their fellows, as contrasted with being rejected by them, and who

represent the most easily reclaimable, socially, by teacher intervention.

The other end of the behaviour scale for the Neglectee and Isolate group, the 11.27 per cent rated as Problem/Anti-social, also might be helped to form friendships by teacher assistance through the control of their overt classroom behaviour. Results presented in a later section show that, from the children's viewpoint, good behaviour is an acceptable characteristic and while enforced good behaviour may not alter personality characteristics immediately, the reduction of disturbance to other pupils could cause a more favourable attitude towards these disturbing elements.¹

Sex Differences. Comparison of the separate results for Boys and Girls (Table XX) indicates that there are some important behavioural differences between the sexes. All members of the Girls' Star category are rated as either Normal/Sociable or Quiet/Sociable showing that their behaviour is

¹ One girl who participated in this study received Below Average rating in the two consecutive years and who was rated as a Problem and Antisocial was a pupil in the experimenter's class in the following year. Firm measures eliminated problem behaviour until a rating of Normal and Sociable would have been appropriate. Her apparent improvement in popularity was supported by a sociometric test taken in the Third Term when it was found that the number of choices she received had increased from three to six - placing her in the Above Average category.

considered acceptable by both teachers and pupils. A marked contrast is apparent in the distribution of the Boys' Stars. The same percentage as the Girls' Stars was rated as Normal but 10.24 per cent are in the Antisocial category. Further, 7.68 per cent are behaviour problems, 2.56 per cent being Antisocial. An indication is given here that the behaviour which makes girls popular with their classmates is also that which teachers consider desirable in school but that somewhat more variable levels are consistent with high social status in boys. From the absence of cases in the Quiet/Antisocial category it appears probable that the 'friendly fighting' and general horseplay which are common to boys throughout their primary school years help to promote social relationships but do not endear them to their teachers. That these children are considered antisocial by their teachers but obviously not by their peers indicates that an unwarrantably serious view is taken of some such behaviour, at least in relation to personality development.

Above Average Girls illustrated the same characteristics as the Girls' Stars with 94.44 per cent appearing in the combined Normal/Sociable and Quiet/Sociable groups while the comparable Boys' figure of 80.37 per cent shows their increasing spread into all of the less acceptable categories.

It is in the ratings of the Below Average groups that

the distribution of the sexes attains its greatest correspondence. Little difference is found throughout, except that there are just over twice as many Girls assessed as Quiet/Antisocial as there are Boys in this category. That a further sex difference is shown by this figure is supported by the Neglectee and Isolate data where the percentage of Problem/Antisocial Boys has increased by 7.68 per cent from the previous sociometric category compared with a decrease of 1.1 per cent for the Problem/Antisocial Girls. The Quiet/Antisocial Boys total increased by 5.06 per cent against the Quiet/Antisocial Girls' increase of 10.47 per cent. At this lowest level of social status, 43 per cent of the Boys and 38.71 per cent of the Girls are considered antisocial - sufficiently high percentages to cause concern about the social development of this section of the class.

It is concluded, from the data presented, that Girls and Boys show different characteristics of behaviour, according to the assessments of their teachers. Girls of the upper social status levels exhibit acceptable behaviour to a high degree but there is a general tendency for those rated as antisocial to become quiet in school rather than behaviour problems as might be expected. More complex behaviour patterns are apparent in the Boys' results since a measure of behaviour rated as antisocial by the teachers is apparently quite

consistent with high social status. A greater percentage of the Antisocial Boys of the lower status levels, however, become classroom behaviour problems than is the case with Girls of the same status.

Differences in Behaviour at Two Class Levels. Although the number of classes participating in this study does not allow a breakdown of results to extend to individual standard levels, separate results have been calculated for contributing and intermediate schools to investigate possible differences in behaviour at the middle and upper standard stages of development.

The data obtained from the sociometric survey of both schools, and presented in an earlier section, showed that girls tended to possess a higher level of social maturity than boys of the same age but that boys also progressed in social maturity as they advanced through the classes studied. A similar conclusion is reached through the analysis of teachers' behaviour rating results from the two schools.

In Tables XXI and XXII, Problem behaviour is attributed to 12 per cent of Boys' Stars at the Standard Two to Four level but not to any Stars in Form One, although only 4 per cent were rated as antisocial in Standards Two to Four compared with 28.58 per cent in Form One. Throughout the 'Problem' results for the various sociometric classifications

TABLE XXI

TEACHERS' ASSESSMENTS OF FORM ONE CHILDREN'S BEHAVIOUR RATING
SHOWING PERCENTAGES IN EACH SOCIOMETRIC CATEGORY

BOYS

Sociometric Category	Problem		Normal		Quiet	
	Soc	Anti	Soc	Anti	Soc	Anti
Star	-	-	35.71	28.58	35.71	-
Above Av.	2.13	8.51	68.08	8.51	12.77	-
Below Av.	9.68	6.45	50.00	11.29	19.35	3.23
Neg + Iso.	-	30.77	7.70	30.77	15.38	15.38
Total	5.16	8.83	50.73	13.95	18.39	2.94

GIRLS

Sociometric Category	Problem		Normal		Quiet	
	Soc	Anti	Soc	Anti	Soc	Anti
Star	-	-	83.33	-	16.67	-
Above Av.	-	2.00	66.00	2.00	30.00	-
Below Av.	11.90	9.53	33.33	9.53	30.95	4.76
Neg + Iso.	-	-	33.33	11.11	22.22	33.33
Total	4.67	4.67	51.40	5.61	28.98	4.67

TABLE XXII

TEACHERS' ASSESSMENTS OF STANDARDS TWO TO FOUR CHILDREN'S
BEHAVIOUR RATING SHOWING PERCENTAGES IN EACH SOCIO-

METRIC CATEGORY

BOYS

Sociometric Category	Problem		Normal		Quiet	
	Soc	Anti	Soc	Anti	Soc	Anti
Star	8.00	4.00	68.00	-	20.00	-
Above Av.	10.00	3.33	58.33	3.33	21.68	3.33
Below Av.	11.48	8.19	44.26	6.56	27.87	1.64
Neg + Iso.	-	7.41	37.04	14.81	37.04	3.70
Total	8.67	5.78	51.45	5.78	26.01	2.31

GIRLS

Sociometric Category	Problem		Normal		Quiet	
	Soc	Anti	Soc	Anti	Soc	Anti
Star	-	-	61.91	-	38.09	-
Above Av.	6.89	-	62.07	-	31.04	-
Below Av.	6.25	6.25	51.56	4.69	25.00	6.25
Neg + Iso.	-	9.09	31.82	18.18	31.82	9.09
Total	4.85	3.64	53.93	4.25	29.69	3.64

the Standard Two to Four Boys showed higher percentages in all except the Neglectee and Isolate category where 30.77 per cent of the Form One Boys were rated as Problem/Antisocial. Another major difference is the increase in the percentage of Form One Boys assessed in the Quiet/Antisocial group - a tendency previously noted in relation to Girls' results. In fact the Form One Neglectee and Isolate Boys have a total of 76.92 per cent rated as antisocial compared with only 25.92 per cent of the Boys in Standards Two to Four - a marked increase, for the Form Ones, over the 20.97 per cent and 16.39 per cent respectively for the next highest sociometric category.

The differences between Boys at the two levels lies in the larger percentage of problem behaviour by high social status boys in Standards Two to Four and in the markedly antisocial nature, from the teachers' viewpoint, of the low status boys in Form One.

Girls' results presented in the same tables show a very similar pattern between the two levels except in the Below Average category. Most problem behaviour from girls comes from this social level and the 11.9 per cent of Problem but Sociable behaviour at the Form One level suggests a type of 'Tom-boy' behaviour more characteristic of younger boys and suggests a reason for their relative lack of social acceptance

or perhaps an endeavour to win some type of recognition.

These results illustrate the maturational tendencies outlined earlier in this section. Popular boys in the upper classes show behaviour which is increasingly acceptable to the teachers but unpopular boys in the same classes represent markedly greater behaviour problems than do their counterparts in Standards Two to Four. Popular girls exhibit similar configurations throughout but those rated as quiet but who are unaccepted at the Form One level tend to become more anti-social in their behaviour. This is at once a measure of the success of the schools in establishing acceptable behavioural patterns and an indication of the necessity to concentrate more attention upon the socially maladjusted.

II. A COMPARISON BETWEEN MEN TEACHERS' AND WOMEN TEACHERS'

ESTIMATES ON THE BEHAVIOUR RATING SCALE

Since the estimates on the 'Behaviour Rating Scale' were made by both men and women teachers, comparative tables have been presented to investigate whether or not there are any differences in their ratings.

Men Teachers' Ratings. Men teachers in the Standard Two to Four classes show slightly greater percentages in the Problem columns than the average but fewer in the antisocial category; 16.12 per cent (Table XIII) of their Boys being assessed as behaviour problems but a total of only 8.07 of the

TABLE XXIII

MEN TEACHERS' ASSESSMENTS OF STANDARD TWO TO FOUR CHILDREN'S
BEHAVIOUR RATING SHOWING PERCENTAGES IN EACH SOCIOMETRIC
CATEGORY

BOYS						
Sociometric Category	Problem		Normal		Quiet	
	Soc	Anti	Soc	Anti	Soc	Anti
Star	11.11	5.56	61.11	-	22.22	-
Above Av.	13.95	2.33	62.79	2.33	18.60	-
Below Av.	17.07	4.88	41.46	4.88	31.71	-
Neg + Iso.	-	4.55	45.45	4.55	40.90	4.55
Total	12.09	4.03	52.42	3.23	27.42	0.81

GIRLS						
Sociometric Category	Problem		Normal		Quiet	
	Soc	Anti	Soc	Anti	Soc	Anti
Star	-	-	50.00	-	50.00	-
Above Av.	7.50	-	70.00	-	22.50	-
Below Av.	6.82	6.82	61.36	2.27	15.91	6.82
Neg + Iso.	-	6.25	43.75	12.50	31.25	6.25
Total	5.26	3.51	60.53	2.63	24.56	3.51

class being rated as antisocial. Totals of 16.67 per cent, 16.28 per cent and 21.95 per cent respectively for Stars, Above Average and Below Average categories represent the largest percentages found in this analysis, but in all cases the majority of these are also considered to be sociable children. Another characteristic of their rating is the small number of boys in the Quiet/Antisocial section - only 4.55 per cent of the Neglectee and Isolates being so designated; less than 1 per cent of the whole class.

The same teachers rating Girls in the Standard Two to Four classes place an overall average of 85.09 per cent in the Normal/Sociable or Quiet/Sociable categories and only 8.77 per cent were considered Problems. The largest percentage of Problem ratings occurs in the Below Average group where there are 13.64 per cent - half of these being antisocial. Most of the antisocial cases occur in the Neglectee and Isolate classification, 24.9 per cent being so designated but 15.91 per cent of the Below Average category also received this rating. No girls from either the Star or Above Average levels were considered to be antisocial.

At the intermediate school, men teachers' ratings of both boys and girls differ considerably from those of the Standard Two to Four classes. There, all of the Boys' Stars

are rated as Normal (Table XXIV) but half are also considered to be antisocial. Similarly with the Above Average group, 82.60 per cent are Normal but 13.04 per cent also received Antisocial rating. From these figures it would seem that some "Antisocial" behaviour, as far as men teachers are concerned, is "normal" behaviour for high status boys. As reflected in all other sections also, the Below Average children have the largest percentage in the Problem category but their most interesting assessment is that shown in the rating of all Neglectee and Isolate boys as Quiet and two thirds of them as Antisocial - a finding which in the previous section based upon overall totals appeared to be more characteristic of girls' behaviour.

Girls' ratings in Form One, by men teachers, (Table XXIV) show a close correspondence with those of the Boys except that no Stars and very few Above Average Girls are considered to be antisocial and none are Problems. Approximately half of each category, however, is found to be Quiet. The Below Average group is the only one to contain Problem behaviour, with a percentage of 15.79, but two thirds of these are also found to be Sociable. Some improvement over the Boys' results is again noted with the Neglectees and Isolates since half of these are Normal/Sociable although

TABLE XXIV

MEN TEACHERS' ASSESSMENTS OF FORM ONE CHILDREN'S BEHAVIOUR
 RATING SHOWING PERCENTAGES IN EACH SOCIOMETRIC CATEGORY

Sociometric Category	BOYS					
	Problem		Normal		Quiet	
	Soc	Anti	Soc	Anti	Soc	Anti
Star	-	-	50.00	50.00	-	-
Above Av.	4.35	4.35	69.56	13.04	8.70	-
Below Av.	9.67	6.44	51.61	12.92	12.92	6.44
Neg + Iso.	-	-	-	-	33.33	66.67
Total	6.35	4.76	55.56	15.87	11.11	6.35

Sociometric Category	GIRLS					
	Problem		Normal		Quiet	
	Soc	Anti	Soc	Anti	Soc	Anti
Star	-	-	50.00	-	50.00	-
Above Av.	-	-	53.34	3.33	43.33	-
Below Av.	10.52	5.27	31.58	10.52	36.84	5.27
Neg + Iso.	-	-	50.00	-	25.00	25.00
Total	3.64	1.82	45.45	5.45	40.00	3.64

half of the remainder are in the Quiet/Antisocial group as expected.

By inspection of the data at the two levels an improvement is noted in the behaviour of both sexes as rated by men teachers. Boys become less disturbing elements within the classroom but show a large increase in the percentages rated as Antisocial as they move from the contributing to the intermediate school although this may be merely a reflection of the disciplinary standards of the teachers concerned. In the Standard Two to Four classes, Girls from the lower status groups show distributions of percentages similar to those of the Boys but by the Form One stage, the Girls show large percentages in the acceptable categories and few appear as either Problems or Antisocial.

Women Teachers' Ratings. The outstanding feature of the women teachers' ratings is the assessment of almost all of the Boys who were rated as Problems as Antisocial. That this distribution is not found in the parallel results for Problem Girls is possibly an indication of the lack of appreciation of the fact that there are some factors which, while they are troublesome to classroom discipline, are quite acceptable in Boys social relationships.

The ratings of Boys, in Standards Two to Four, by Women teachers show all Stars as either Normal/Sociable or

Quiet/Sociable (Table XIV). This is a considerable difference from the estimates of the men teachers at the same level - but smaller percentages than theirs are accorded to these two acceptable categories at all other sociometric classifications. Overall Problem behaviour has decreased by 5.92 per cent but an increase of 20.5 per cent in the number rated as Antisocial probably reflects a different viewpoint, as noted in the previous paragraph, rather than a difference in the pupils themselves. A further interesting finding is the assessment of no Neglectee and Isolate Boys as Normal/Sociable and only 20 per cent as Quiet/Sociable: 80 per cent of this category being found to be Antisocial. In this estimate the women teachers show a greater awareness of the social interrelationships of these children than was shown in the estimation of sociometric status in a previous section of this study - a finding which supports the contention that a knowledge of traits characteristic of each sociometric category would aid teachers to become more aware of pupils' social relationships within their classes.

Girls' ratings at the Standard Two to Four level show similar distributions at the Star and Above Average classifications as were found in the men teachers' ratings. All Stars

TABLE XXV

WOMEN TEACHERS' ASSESSMENT OF STANDARD TWO TO FOUR CHILD-
REN'S BEHAVIOUR RATING SHOWING PERCENTAGES IN EACH SOCIO-
METRIC CATEGORY

BOYS

Sociometric Category	Problem		Normal		Quiet	
	Soc	Anti	Soc	Anti	Soc	Anti
Star	-	-	85.71	-	14.29	-
Above Av.	-	5.88	47.05	5.88	29.42	11.77
Below Av.	-	15.00	50.00	10.00	20.00	5.00
Neg + Iso.	-	20.00	-	60.00	20.00	-
Total	-	10.20	48.97	12.25	22.46	6.12

GIRLS

Sociometric Category	Problem		Normal		Quiet	
	Soc	Anti	Soc	Anti	Soc	Anti
Star	-	-	85.71	-	14.29	-
Above Av.	5.56	-	44.44	-	50.00	-
Below Av.	5.00	5.00	30.00	10.00	45.00	5.00
Neg + Iso.	-	16.67	-	33.33	33.33	16.67
Total	3.92	3.92	39.22	7.84	41.18	3.92

were either Normal/Sociable or Quiet/Sociable but whereas the percentages were evenly divided in the men's results, here 85.71 per cent occur in the Normal column. This difference is reversed in the Above Average section where, although a small and comparable percentage was assessed as Problems, the men rated 70 per cent as Normal/Sociable against 44.44 per cent for the women; the remaining pupils in this category being Quiet and Sociable. The Below Average Girls showed parallel assessments for both sets of teachers and although the balance between the Normal/Sociable and Quiet/Sociable groups varied, the combined totals for these classifications differed by only 2.27 per cent.

It is in the Neglectee and Isolate group that major differences appear between the men's and women's ratings. At this level women placed their largest percentage of Problem behaviour and rated two thirds of the category as antisocial. None of these girls was considered Normal/Sociable although the men found 43.75 per cent deserving of this classification.

Women teachers in the Form One classes experienced more Problem behaviour with their Boys than did any other section covered in these tables. Of the 16.43 per cent of Boys who received Problem rating, (Table XXVI), three quarters were considered to be Antisocial, a difference from the men in Form One classes who had 11.11 per cent of their Boys rated as

TABLE XXVI

WOMEN TEACHERS' ASSESSMENTS OF FORM ONE CHILDREN'S BEHAVIOUR
 RATING SHOWING PERCENTAGES IN EACH SOCIOMETRIC CATEGORY

BOYS

Sociometric Category	Problem		Normal		Quiet	
	Soc	Anti	Soc	Anti	Soc	Anti
Star	-	-	25.00	12.50	62.50	-
Above Av.	-	12.50	66.67	4.17	16.67	-
Below Av.	9.68	6.45	48.39	9.68	25.80	-
Neg + Iso.	-	40.00	10.00	40.00	10.00	-
Total	4.10	12.33	46.58	12.33	24.66	-

GIRLS

Sociometric Category	Problem		Normal		Quiet	
	Soc	Anti	Soc	Anti	Soc	Anti
Star	-	-	100.00	-	-	-
Above Av.	-	3.45	58.62	-	37.93	-
Below Av.	13.04	13.04	34.78	8.70	26.09	4.35
Neg + Iso.	-	-	20.00	20.00	20.00	40.00
Total	5.66	7.55	56.60	5.66	18.87	5.66

Problems but found over half of these Sociable even though a total of 26.98 per cent of their classes were deemed Antisocial compared with 24.66 per cent in the women's classes.

As with all other sections, women found Boys' Stars mainly Normal/Sociable or Quiet/Sociable but included 12.5 per cent in the Normal/Antisocial group. Above Average Boys were also predominately in these categories but of the 12.5 per cent of Problem children, a higher percentage than is found in any other section for this sociometric level, all were rated as Antisocial.

A close parallel with the men's classes is found in the Below Average Boys' group, except that none is rated as Quiet/Antisocial, while a marked contrast is seen in the lowest status where, although the men rated all the Boys as Quiet (and two thirds of them as Antisocial), the women placed 10 per cent in the Quiet/Sociable group and the rest as either Normal or Problems. 80 per cent of this sociometric category is considered Antisocial with 40 per cent also being behaviour problems.

With the exception that men find Form One girls quieter than do women teachers, the results for the Star and Above Average groups show a close correspondence. This is also the case with the Below Average group, apart from the

increased Problem percentage in the Girls' results, while the Neglectees and Isolates are again found to be either Normal or Quiet although 20 per cent are Normal/Antisocial and 40 per cent are Quiet/Antisocial, this last figure representing almost all of the members of the class to be so rated since no Boys were included in this category.

Summary. Two factors seem to be important from the data presented in this section. The first concerns the differences in the amount of Problem behaviour experienced by the various teachers and the fact that it was with children of different sociometric status levels, and the second is the varying percentages of antisocial assessments.

Men teachers in Standards Two to Four rated 5.92 per cent more of their Boys as Problems than did women teachers in these classes but showed smaller percentages in the Girls results; however, the women found totals of 28.57 per cent for the Boys and 15.68 per cent for the Girls to be antisocial against the men's figures of 8.07 per cent and 9.65 per cent respectively. These results are the reverse of those expected since it is popularly considered that men teachers are more capable in the handling of those children who show antisocial tendencies and are likely to become behaviour problems. Perhaps, however, this represents

a difference in the treatment of difficult personalities between the two sets of teachers - one permitting the expression of antisocial behaviour as overt acts towards the whole class, to the benefit of interpersonal relationships, and the other preventing such expression with consequent better conditions for the sociable children but not for the antisocial pupils. Which type of class is "better behaved" is difficult to assess since the exclusive practise of either type presents obvious dangers.

Teachers in Form One also show differences between the sexes with men teachers having less Problem behaviour than the women, especially with their Girls who also receive a higher sociability rating. Totals of antisocial pupils are high, ranging from 10.91 per cent to 26.98 per cent, for both men and women teachers.

While interpretation of these data is affected by the possibility that men and women teachers have different standards in the assessment of both classroom behaviour and personality traits, differences are apparent and the awareness of their own characteristics of assessment could aid teachers in the social appraisal of their classes.

CHAPTER IX

TRAITS ATTRIBUTED TO POPULAR AND UNPOPULAR CHILDREN

ON A "GUESS WHO" TEST

I. FORM A

Development of the "Guess Who" Test

To supplement the information gained by the use of the sociometric test it seemed desirable to attempt to ascertain not only which pupils were socially popular or unpopular but also what characteristics produced their status. Hartshorne, May and Maller¹ developed the "Guess Who?" technique for use in character studies by presenting a selection of trait descriptions and asking the pupils being tested to indicate which individuals from their group best fitted the descriptions offered. The number of mentions was summed algebraically and a score for each trait was found for every person rated. A profile of trait ratings was thus obtained showing the extent to which each characteristic was descriptive of the individual by the size of the score obtained.

As this technique seemed to offer possibilities for finding the traits attributed to the members of the various sociometric categories, a modified test was constructed at

¹Hartshorne, E., May, M.A., and Maller, J.B. Studies in the Nature of Character, New York, The Macmillan Company, 1929.

School A in 1961.

Many studies have followed the procedure used by Harts-horne, May and Maller in which the various characteristics to be checked were selected somewhat arbitrarily. Gronlund², however, has suggested that the characteristics to be rated should be obtained from the children themselves. Since the characteristics which it was desirable to find were those which the children themselves see as being important for the formation of friendships it was decided to follow Gronlund's suggestion.

Selection of the Test Items (Form A)

A short time after taking the sociometric test, usually two or three days, the children were told that on the test some children had received a large number of choices while others had received very few. It was pointed out that some people seemed to have made more friends than others. The children were then asked to think about why this had occurred and also why they had chosen the people they themselves had named. Names were carefully excluded throughout but a list of the traits mentioned was made upon the class blackboard. The lists from the six classes were then compared and the

²Gronlund, N.E., Sociometry in the Classroom, New York, Harper and Brothers, 1959.

traits which were mentioned most frequently were selected as test items.

It was hoped that the traits found by this method would correlate highly with high sociometric status and, if this were the case, that they would indicate some specific areas towards which it should be possible to direct remedial work with the socially neglected. At the same time, however, it was desirable to check that lack of these traits did in fact contribute to low social status, i.e. that unpopularity was caused not only, perhaps, by the possession of undesirable traits but might also be caused by the absence of positive ones.

To check this aspect, each trait was included in a negative form as well as in the positive manner. Thus, for example, item 7 'This person is always kind', was followed by item 8, 'This person is not usually kind'. Some exceptions were made and the negative form was omitted where it would have implied a social criticism which was too severe or which might have led the children into thinking in an objectionable way about their fellows. Thus item 73, 'This person comes from a good home', and item 74, 'This person always dresses neatly', were not included in the negative forms even though the answers might have proved significant. Similarly, items 80, 'This person lives near me', and 81, 'I have liked this person for a long time' were included only in the positive form since the

negative of item 80 would add little information, while item 81 deals with length of association and therefore has no negative. Item 75, 'This person is always sensible', is an outstandingly positive characteristic and aims to distinguish between those who merely behave more 'normally' and so again a negative form is unnecessary.

When considering the wording of the test items, the most common form in which the item was given by the children was accepted. While endeavouring always to ensure that the items were clear in meaning, no attempt was made to rid the list of colloquialism and although terms such as "misbehaves", "gets the pip" and "respects adults" are somewhat vague they seemed to supply sufficiently precise reference for the children.

The eighty-two items³ were cyclostyled as Form A, with enough space alongside each item for writing only one name. By limiting the spread of choices any one individual could make, it was hoped that the extremes would show up more clearly in the resultant choices. No limit was placed upon the people who could be chosen except that they had to be members of the same school class.

³Owing to a typing error, two items were numbered 31. In all results these have been recorded as item 31 and item 31a.

Scoring and Results of the "Guess Who?" (Form A)

Since the purpose of the test was to find which traits were characteristic of the extreme sociometric categories, no individual profiles were constructed. Instead, test items were listed for analysis in two ways (a) those which showed consistent trends in relation to the sociometric status and (b) those which received the highest scores at the Star or the Neglectee rating.

Items in the Boys' Results which showed Consistent Trends. From the results showing the number of times each item was attributed to the various sociometric categories, (detailed results appear in Appendix E), a list was made of items which showed consistent trends in relation to the sociometric categories. The items which were most often attributed to the Star category and least often to the Neglectees were called 'positive' traits while those which showed trends in the opposite direction were called 'negative' traits.

Forty-five positive traits are recorded for the Boys and have been arbitrarily classified into four sections to try to show various aspects of personality and behaviour which, considered together, should give a compound picture of those traits characteristic of the most popular children. Only four negative traits showed trends and these have been included at the end of the table. (Table XXVII)

TABLE XXVII

"GUESS WHO?" ITEMS FOR BOYS WHICH SHOWED CONSISTENT TRENDS
IN RELATION TO SOCIOMETRIC CATEGORIES

POSITIVE TRAITS

Personal	
Item No.	Description of Item
5	This person is a good loser. ++
6	This person is not a good loser. *
7	This person is always kind.
15	This person always tries hard.
18	This person does not grumble or complain.
19	This person is sympathetic.
25	This person is clever. +
36	This person is not jealous.
38	This person can see the funny side of things.
46	This person always owns up.
56	This person is very good-natured.
75	This person is always sensible.
77	This person is never cowardly. *
79	This person is very good-looking.
Social	
Item No.	Description of Item
11	This person likes the same things as I do.
12	This person does not like the same things as I do.*
13	This person often gets the pip. *
14	This person does not get the pip. ++
22	This person is not a spoil-sport. ++
35	This person is not a cry-baby. ++
44	This person is always friendly. *

TABLE XXVII (Continued)

55	This person never has a row.
58	This person does not tease.
59	This person often teases people. ++
60	This person never gives orders.
61	This person often gives orders. *
64	This person does not interfere.
65	This person often interferes. *
68	This person has the same hobbies as I have. ++
71	This person always shares things.
78	This person often gives you things.

Behaviour

Item No.	Description of Item.
9	This person is always well-behaved. *
29	This person never skites. *
31	This person is always playful.
33	This person never uses bad language.
42	This person is always obedient.
48	This person often gets into mischief. *
49	This person never gets into mischief.
50	This person never tells lies.
62	This person does things without being asked.

Environment

Item No.	Description of Item
3	This person usually goes to church.
40	I have known this person for a long time.
73	This person comes from a good home. ++
74	This person always dresses neatly. * ++
81	I have liked this person for a long time.

TABLE XXVII (Continued)

NEGATIVE TRAITS

Item No.	Description of Item
4	This person hardly ever goes to church.
16	This person does not try hard. *
26	This person is not very clever. *
31a	This person is not very playful. *

* Items followed by an asterisk did not appear in the list for Girls.

+ Items which were significant at .01 level.

++ Items which were significant $> .05$ level.

Analysis of the table shows various inconsistencies which indicate that some positive items may be attributed to high status children and that the negative of the same items also show trends in the same direction. Thus a Star qualifies as a person who gets the pip and who does not get the pip; who does not tease and who often teases; does not interfere and often interferes and often or never gets into mischief. Each of these items, however, reflects activity in social situations and it appears that Stars and Above Average children could, merely by virtue of their greater amount of social interaction, qualify for the negative form as well as the more desirable positive form.

From the data, the image of the popular boy at the Standard Two to Four level reflects the values and standards not only of the children themselves but also of the larger community. The Star is expected to be hard-working, courageous, good-humoured and presenting a cheerful acceptance of his situation. That he is also considered handsome and clever may be due to 'halo effect' acquired from his likeable personality.

In his social contacts he is always friendly and his presence in the situation is felt even though this may qualify him for adverse criticisms. However, his generosity, similar interests and tolerance preserve his popularity.

It is in the general behaviour expected of the popular

boy that the children show their adoption of adult standards since, in spite of a possibility that he may get into mischief, the high status child reflects those behaviour characteristics which most teachers are trying to inculcate in their children. That these standards are not always observed is frequently obvious in the classroom but it is heartening to note in these results that the children are accepting them as criteria upon which to judge their own behaviour.

Length of association occurs twice in the section showing the influence of environment but both are relative measures and must be interpreted cautiously since it would seem unlikely that mere extension of association alone would foster friendships. The assimilation of community values is again reflected in the standard of home and dress, perhaps somewhat unexpected in boys, and particularly in the stress upon going to church since infrequent attendance at church is one of the negative items also.

The items which showed negative trends all, except inattendance at church, reflect attribution of inertia. That social activity is desirable was shown in the positive results, even if such activity is not always received in a friendly manner, and it appears that some unpopular children may be neglected because of inactivity as much as through their possession of undesirable traits.

Items in the Girls' Results which Showed Consistent Trends. An examination of the data for Girls (Table XXVIII) shows that most of the items in which trends occurred in the Boys' results also had trends in the Girls' results. The few differences do, however, indicate that Girls consider their social relationships in a somewhat different manner.

In the personal section, the Girls add helpfulness and appreciation of things done to the characteristics rated for the Boys but the fact that the items involving cowardice and not being a good loser have been omitted by them probably shows an appreciation of social interaction in more generalized situations rather than merely in the play contacts which seem to have fostered the rating for Boys. A similar tendency is found in the section on 'social' items where the Boys list several characteristics which adults would consider to be adverse but which, as has been noted, probably arise from vigorous participation in social activities. The Girls omit these and indicate their attitude in the inclusion of 'never fights' and in this section and in the similar traits 'being well-mannered' and 'never losing your temper' which appear in the behaviour list.

The environment section again stresses length of association and church attendance, as was the case with the Boys, and adds proximity of residence although perhaps the most

TABLE XXVIII

"GUESS WHO?" ITEMS FOR GIRLS WHICH SHOWED CONSISTENT TRENDS
IN RELATION TO SOCIOMETRIC CATEGORIES

POSITIVE TRAITS

Personal

Item No.	Description of Item
1	This person often helps others. * ++
5	This person is a good loser.
7	This person is always kind. ++
15	This person always tries hard.
18	This person does not grumble or complain.
19	This person is sympathetic. ++
25	This person is clever.
36	This person is not jealous.
38	This person can see the funny side of things.
46	This person always owns up.
56	This person is very good-natured.
66	This person is always thankful for anything done for him. *
75	This person is always sensible. ++
79	This person is very good-looking.

Social

Item No.	Description of Item
11	This person likes the same things as I do.
14	This person does not get the pip.
22	This person is not a spoil-sport.
35	This person is not a cry-baby.
55	This person never has a row.
58	This person does not tease.

TABLE XXVIII (Continued)

59	This person often teases people.
60	This person never gives orders.
64	This person does not interfere.
68	This person has the same hobbies as I have.
70	This person never fights. *
71	This person always shares things.
76	This person often invites you to parties. *
78	This person often gives you things.

Behaviour

Item No.	Description of Item
23	This person is well mannered. * ++
28	This person never loses his temper. *
31	This person is always playful.
33	This person never uses bad language.
42	This person is always obedient.
49	This person never gets into mischief.
50	This person never tells lies.
52	This person always respects adults.
62	This person does things without being asked.

Environment

Item No.	Description of Item
3	This person usually goes to church. ++
40	I have known this person for a long time.
73	This person comes from a good home.
80	This person lives near me. *
81	I have liked this person for a long time.

TABLE XXVIII (Continued)

NEGATIVE TRAITS

Item No.	Description of Item
4	This person hardly ever goes to church.
17	This person often grumbles or complains. *
20	This person is a spoil-sport.
24	This person is not well-mannered.
27	This person loses his temper easily. *
31a	This person is not very playful.
43	This person is often disobedient. *
47	This person never owns up. *
48	This person often gets into mischief. *
51	This person often tells lies. *
53	This person does not respect adults. *
57	This person is not good-natured. *
63	This person always has to be asked to do things. *
65	This person often interferes. *
67	This person is never thankful.

* Items followed by an asterisk did not appear in the list for Boys.

++ Items which were significant $>.05$ level.

surprising aspect of this section is the omission of any reference to dressing neatly which was rated as a characteristic of popular Boys.

In contrast to the Boys, who showed trends in only four negative traits, the Girls list fifteen and it is in this section that the major social difference between the sexes is illustrated. While Boys are prepared to tolerate, or even require, fighting, teasing and a certain amount of resistance to authority in their most popular associates, Girls show a much more gentle sociability. Thus, most of the Girls' list of negative traits is made up of characteristics the positive aspects of which are found in the list of positive traits suggesting that not only are such positive traits desirable but also that lack of them is a cause of unpopularity, whereas Boys may possess the unfavourable traits but still rate highly socially through the possession of some more favourable characteristics.

A chi-square test of the items showing trends revealed that in the majority of items the trends observed were not statistically significant while in the remainder a low measure of significance was obtained. Where an item was significant the level of confidence is shown in Tables and again, as so often apparent in the field of interpersonal relationships, results must be considered as illuminating tendencies rather

than as valid and absolute characteristics.

Ranking of Items by Mean Scores at Extreme Sociometric Categories. Since the "Guess Who? Test, Form A" did not establish statistically significant differences a second form was developed for use in both schools in 1962 from those items which received the highest mean scores at the extremes of sociometric classification. Ranked lists of traits, all of which were included in the results of items, showing consistent trends, showing the highest mean scores at the Star level are presented in Table XXIX while the lists for the Neglectee and Isolate category appear in Table XXX.

TABLE XXIX
MEAN SCORES RECEIVED BY MEMBERS OF THE STAR CATEGORY
ON "GUESS WHO?" FORM A

BOYS

Item No.	Trait Rated	Mean Score
25	This person is clever.	3.7
35	This person is not a cry-baby.	3.0
15	This person always tries hard.	3.0
77	This person is never cowardly.	2.9
5	This person is a good loser.	2.8
42	This person is always obedient.	2.6
79	This person is very good looking.	2.5
1	This person often helps others.	2.5
68	This person has the same hobbies as I have.	2.5
69	This person is often fighting.	2.5
6	This person is not a good loser.	2.5
22	This person is not a spoil sport.	2.4

GIRLS

Item No.	Trait Rated	Mean Score
3	This person usually goes to church.	2.7
7	This person is always kind.	2.5
23	This person is well-mannered.	2.5
75	This person is always sensible.	2.5
19	This person is sympathetic.	2.2
74	This person always dresses neatly.	2.2
64	This person does not interfere.	2.1
33	This person never uses bad language.	2.1
73	This person comes from a good home.	2.1
66	This person is always thankful for anything done for him.	2.0
56	This person is very good-natured.	2.0
79	This person is very good-looking.	2.0

TABLE XXX

MEAN SCORES RECEIVED BY MEMBERS OF THE NEGLECTEE CATEGORY
ON "GUESS WHO?" FORM A

BOYS		
Item No.	Trait Rated	Mean Score
2	This person does not usually help others.	2.8
16	This person does not try hard.	2.7
47	This person never owns up.	2.6
4	This person hardly ever goes to church.	2.0
26	This person is not very clever.	1.7
72	This person never shares things.	1.5
31	This person is not very playful.	1.3
GIRLS		
Item No.	Trait Rated	Mean Score
20	This person is not sympathetic.	1.7
31	This person is not very playful.	1.5
51	This person often tells lies.	1.3
43	This person is often disobedient.	1.2
67	This person is never thankful.	1.2
63	This person always has to be asked to do things.	1.2

II. FORM B

Selection of Items for "Guess Who? Test, Form B"

It was considered valuable to discover whether or not the traits which distinguished the extremes would again be attributed to the same categories if a wider selection of choices were allowed. In the "Guess Who? Test, Form B" (Appendix B), constructed from items in these lists, the children were asked to name five, from their own sex, who showed the characteristics being rated. As different characteristics had received different ratings with Boys and Girls, two separate test forms were cyclostyled.

The "Guess Who? Test, Form B" for Boys consisted of nineteen items. Five of these were the negative characteristics which had ranked highest with Neglectees in Form A. Two other items from this test which had received higher mean scores than expected were omitted. The first of these, item 4, 'This person hardly ever goes to church.' was not included because it does not deal directly with behaviour in the school situation. Item 72, 'This person never shares things.' was also excluded as, owing to the amount of time involved in scoring this test, the number of items was being reduced and although the mean score of item 31, 'This person is not very

playful.' was .2 lower than that of item 72, the former was included so that comparison could be made with the same item in the Girls' results. Of the twelve items which ranked highest in the Star category, ten were selected for inclusion. The two omitted were item 68, 'This person has the same hobbies as I have.' as it deals with similarity of interests rather than personality characteristics, and item 35, 'This person is not a cry-baby.' which, in spite of the fact that it received the second highest ranking, was felt to be unsuitable since Form B would be administered not only to the pupils in Standards Two to Four but also to the Form One pupils at School B.

Four further items were included in the tests for both sexes although they were not in the Form A test originally given. Two of the items, item 18 'These people are very good at sports.' and item 19, 'These people are not very good at sports.' were inserted to investigate the assertion which teachers often make that those who are competent at sports tend to be more popular socially. Item 16, 'These people often disturb the class through general noisiness.' and item 17, 'These people are very quiet and seldom disturb the class.' were included so that comparisons could be made with the findings of the Teachers' Estimate of Pupils' Behaviour rating

scale.

As with the Boys' test the "Guess Who? Test, Form B" for Girls consisted of nineteen items. Again five were characteristic of the Neglectees and ten characteristic of Stars. One item, item 51, 'This person often tells lies.' which had ranked highly with the Neglectee category was not included because of its destructively critical nature. As a marginal case it had been included in Form A where only one choice was expected, although the space could have been left blank if desired, but with five choices expected it was felt to be undesirable and so was omitted. Item 3, 'This person usually goes to church.' even though it received the highest ranking in the Star group was also excluded for the reasons outlined in the discussion of this item in the Boys' test, while item 73, 'This person comes from a good home.' was left out, again because of the same criticism. One other item was included because it showed slightly conflicting results in Form A. Item 74, 'This person always dresses neatly.' did not show a consistent trend but received sixth ranking on mean scores and so appears in Form B.

Results of "Guess Who? Test, Form B"

Boys' Results. From the results of the "Guess Who? Test, Form B" (Appendix B), lists of traits have been obtained which showed consistent trends and high levels of statistical

significance when tested by the chi-square test. Eight items, as shown in Table XXXI, proved characteristic of the most popular Boys in Standards Two to Four and support the conclusions made from Form A that such Boys must possess, or at least be considered to possess, the personal qualities of helpfulness, intelligence, courage and good looks. Surprisingly, Stars are not good losers but must be good at sports. The lack of sporting ability is found to be a characteristic of Neglectee and Isolate children (Table XXXII) along with the charge that such people 'do not usually try hard.'

Form One Boys show a similar list of characteristics for Star Pupils (Table XXXI), while in the list for Neglectee and Isolate children several negative versions of the same items appear suggesting that the presence of such traits is an important factor in social acceptance and that the lack of these traits causes unpopularity. As with the Standard Two to Four Boys, the Stars in Form One are expected to help their fellows and be clever, good looking and obedient, but they are also considered to try hard, something which was only negatively indicated in the lower classes' results, and, in contrast, are not spoil sports which is more consistent with expectations. Sporting ability is again rated as a necessity and lack of such ability is again a characteristic of the Neglectees and Isolates.

TABLE XXXI
CHARACTERISTICS OF BOYS IN THE STAR CATEGORY
AS SHOWN ON THE "GUESS WHO? TEST, FORM B"

STANDARDS TWO TO FOUR		
Item No.	Description of Item	χ^2 Significance Level
1	These people often help others.	.01
5	These people are clever.	.01
7	These people are never cowardly.	.01
10	These people are always obedient.	.01
11	These people are very good-looking.	.01
14	These people are not good losers.	.20
15	These people are not 'spoil sports'.	.01
18	These people are very good at sports.	.01

FORM ONE		
Item No.	Description of Item	χ^2 Significance Level
1	These people often help others.	.01
3	These people always try hard.	.01
5	These people are clever.	.01
8	These people are good losers.	.01
10	These people are always obedient.	.50
11	These people are very good-looking.	.01
15	These people are not 'spoil sports'.	.01
18	These people are very good at sports.	.01

TABLE XXXII

CHARACTERISTICS OF BOYS IN THE NEGLECTEE AND ISOLATE
CATEGORIES AS SHOWN ON THE "GUESS WHO? TEST FORM B"

STANDARDS TWO TO FOUR		
Item No.	Description of Item	χ^2 Significance Level
4	These people do not usually try hard.	.05
19	These people are not very good at sports.	.01

FORM ONE		
Item No.	Description of Item	χ^2 Significance Level
2	These people do not usually help others.	.01
4	These people do not usually try hard.	.01
6	These people are not very clever.	.01
9	These people never own up.	.01
13	These people are not very playful.	.01
19	These people are not very good at sports.	.01

Of the test items which do not appear on Tables only one shows any interesting distribution of scores. Item 7, 'These people are never cowardly.' was significant at the .01 level with the Standard Two to Four Boys but failed to show a consistent trend in the Form One Boys' Results. That this is a valid characteristic of Form One Boys, however, is shown by the small amount by which it misses completing a trend and by the fact that it is attributed to the Stars almost five times as often as it is to the Neglectees and Isolates.

Girls' Results. The two lists of traits for Girls' Stars at School A and School B, presented in Table XXXIII are identical and portray a somewhat more placid personality than is found in the Boys' Stars. Girls are expected to be kind, well-mannered, good-natured, sympathetic, thankful but not interfering, good at sports and attractive in both appearance and dress. The Standard Two to Four Girl Neglectees and Isolates are considered to be unsympathetic, not playful and have to be asked to do things, while inability at sports is characteristic of this category at both class levels. (Table XIXIV). Item 14, 'These people never use bad language.' and item 17, 'These people seldom disturb the class.' do not show complete trends but here again differences between the mean scores for the Stars and Neglectees are considerable and so these items might also be considered tentatively as being

TABLE XXXIII
CHARACTERISTICS OF GIRLS IN THE STAR CATEGORY
AS SHOWN ON THE "GUESS WHO? TEST, FORM B"

STANDARDS TWO TO FOUR		
Item No.	Description of Item	χ^2 Significance Level
1	These people are always kind.	.01
2	These people are well-mannered.	.01
4	These people are sympathetic.	.01
6	These people always dress neatly.	.01
8	These people do not interfere.	.01
9	These people are always thankful for anything done for them.	.01
11	These people are very good-natured.	.01
13	These people are very good-looking.	.01
18	These people are very good at sports.	.01

FORM ONE		
Item No.	Description of Item	χ^2 Significance Level
1	These people are always kind.	.01
2	These people are well-mannered.	.01
4	These people are sympathetic.	.01
6	These people always dress neatly.	.01
8	These people do not interfere.	.01
9	These people are always thankful for anything done for them.	.01
11	These people are very good-natured.	.01
13	These people are very good-looking.	.01
18	These people are very good at sports.	.01

TABLE XXXIV

CHARACTERISTICS OF GIRLS IN THE NEGLECTEE AND ISOLATE
CATEGORIES AS SHOWN ON THE "GUESS WHO? TEST, FORM B"

STANDARDS TWO TO FOUR		
Item No.	Description of Item	χ^2 Significance Level
3	These people are not very playful.	.01
5	These people are not sympathetic.	.01
12	These people always have to be asked to do things.	.70
19	These people are not very good at sports.	.01

FORM ONE		
Item No.	Description of Item	χ^2 Significance Level
19	These people are not very good at sports.	.01

characteristic of Girls' Stars.

Sporting Prowess and Behaviour in Class. The postulate that sporting prowess brings popularity is consistently supported throughout the results but items 16 and 17, in both the Girls' and the Boys' form, on behaviour in class, do not indicate any direct relationship between general noisiness in class and popularity.

Summary. In both sexes the traits rated as characteristic of the most popular children are those which are desirable by adult standards and an analysis of the ways in which these traits can be developed within the classroom should be of value to every teacher. The extent to which teachers could make and use such an analysis, however, would probably be limited by each teacher's own personality characteristics but the tables presented here could form a basis for such remedial social investigation.

Throughout the construction and scoring of the "Guess Who?" tests every endeavour has been made to examine the positive aspects of character, i.e. those traits which are seen as desirable and appear to aid the achievement of a high popularity rating and the lack of which tends to lower such ratings. No attempt has been made to examine or emphasize the traits which cause unpopularity.

The thesis that possession of particular traits does

correlate with popularity and the absence of the same traits correlates with unpopularity is supported by the results of these tests.

CHAPTER X

THE RELATIONSHIP BETWEEN SOME ENVIRONMENTAL FACTORS AND SOCIOMETRIC STATUS

Various assertions are made, often without any objective basis, about the influence of environmental factors upon the personality and social development of the child. The statements "Of course he is an only child" or, "He comes from a large family" are sometimes used in relation to school behaviour as though they, in themselves, explained facts of social development. Similar comments often refer to the occupational status of the parent or to the number of changes of school which the child has experienced. A brief examination of each of these influences has been made to find whether, in fact, there is any relationship between these factors and a child's popularity rating.

Family Size and Sociometric Status

At School A in 1961, the average number of children in each family was 3.27 with 82.61 per cent of the families consisting of from two to five children. (Table XXIV) Only 7.25 per cent of the families had only one child while 10.14 per cent had six children or more. A calculation of the average number of children per family in relation to sociometric categories gives a close correspondence to the average figure. Stars averaged 2.9 children, Above Average 3.47, Below Average

TABLE XXXV

PERCENTAGES SHOWING THE RELATIONSHIPS BETWEEN FAMILY SIZE
AND SOCIOMETRIC RATINGS

Sociometric Category	Family Size		
	Only Child	2 - 5 Children	6 or More Children
Star	6.90	89.65	3.45
Above Av.	10.96	75.34	13.70
Below Av.	3.90	85.21	10.89
Neg & Iso.	4.20	87.50	8.30
Total	7.25	82.61	10.14

3.27 and Neglectees 3.13 children for each. Of the four Iso-late children, one was an only child and the other three were in families containing from two to five children - giving an overall average of 3.5 - and so showing no difference from the rest.

Table XXXV shows the percentages of children from each sociometric category in three types of family - only child, an 'average' size with from two to five children, and 'large' families of six children or more. Little difference is found between the results for the sociometric categories and the overall averages and so there is no indication that family size has any effect upon the child's social status at school.

Ordinal Position and Social Status

One further factor in relation to the family itself which was investigated was the relationship between social status and the eldest person in the family. Stars, with 41.38 per cent being the eldest, show the greatest percentages while the other three groups have percentages of 35.62 per cent, 31.16 per cent and 33.33 per cent for Above Average, Below Average and Neglectees respectively. There is a slight suggestion that the eldest also tend to be more popular but with an average family size of only 3.27 these figures show little variation from chance and so no causal relationship is attributed to ordinal position.

Changes of School and Sociometric Status

That changes of school are a disruptive influence upon the child's education is apparent from the academic difficulties experienced by children who move from school to school frequently. However, that difficulties of social adjustment also follow from such changes is not borne out by the data presented in Table XXXVI. At School A in 1961, approximately two-thirds of the children had attended the same school throughout their school lives. Decreasing percentages of the population are found as the number of changes increases but the grouping of the final category into 'four or more' raises the percentage to show a somewhat misleading increase. In fact, up to eight changes of school were recorded and decreasing percentages occurred up to this extreme but these few cases did not show any noticeable trends and so have been included in this broader grouping to give a more valid result.

By inspection of the data it appears that both Stars and Neglectees change schools slightly more frequently than do the Above and Below Average categories and so it is concluded that such movement is neither harmful nor favourable to social acceptance but that the level of social acceptability is dependent rather upon the personality characteristics of each individual.

TABLE XXXVI

PERCENTAGES SHOWING THE RELATIONSHIPS BETWEEN CHANGES
OF SCHOOL AND SOCIOMETRIC RATING

Sociometric Category	Number of Times Children Had Changed Schools				
	None	1	2	3	4 or More
Star	55.17	27.59	10.34	3.45	3.45
Above Av.	69.86	19.18	5.48	1.37	4.11
Below Av.	76.63	11.69	7.79	-	3.89
Neg & Iso.	45.83	12.50	12.50	12.50	16.67
Total	67.63	16.43	8.21	2.42	5.31

Parent's Occupation and Sociometric Status

To test whether or not a relationship exists between a child's sociometric status at school and his, or her, parent's occupation, the various occupations were classified according to the broad categories presented by Havighurst¹ and compared with the sociometric status of each child.

School A was examined in this way in 1961 and School B in 1962 since approximately three-quarters of School B was new to the study. Results for both surveys appear in Table XXXVII. A different balance of employments is apparent between School B and School A but the results should remain comparable.

At School A, few major deviations from the average totals appear although a chi-square test on the different percentages, for Star pupils, of 'professional' and 'unskilled' parents shows that a significant difference, at the .01 level of confidence, exists and that children of professional people are more likely to receive 'Star' rating than are the children of unskilled workers. Also, with the percentages for Neglectee and Isolate children a significant difference, at the .05 level of confidence, is found to relate this status to

¹ Havighurst, Robert J. Studies of Children and Society in New Zealand, Department of Education, Canterbury University College, Christchurch, New Zealand, 1954.

TABLE XXXVII

PERCENTAGES IN EACH SOCIOMETRIC CATEGORY IN RELATION TO PARENT'S OCCUPATION

School A 1961

Sociometric Category	Professional	Proprietors & Managers	Office & Sales Wkrs.	Skilled Manual	Semi-Skilled	Unskilled
Star	13.95	9.30	11.63	39.54	23.25	2.33
Above Av.	3.64	10.91	14.55	42.72	23.64	4.54
Below Av.	4.35	12.17	11.30	30.44	31.30	10.44
Neg & Iso.	5.26	5.26	5.26	34.21	34.21	15.80
Total	5.56	10.46	11.76	36.60	27.78	7.84

School B 1962

Sociometric Category	Professional	Proprietors & Managers	Office & Sales Wkrs.	Skilled Manual	Semi-Skilled	Unskilled
Star	12.50	-	18.75	25.00	25.00	18.75
Above Av.	6.93	4.95	26.74	31.68	16.83	12.87
Below Av.	9.68	7.53	26.88	25.81	19.35	10.75
Neg & Iso.	4.76	4.76	14.29	42.86	19.04	14.29
Total	8.22	5.63	25.11	29.87	18.61	12.56

the children of semi-skilled and unskilled parents. No other differences are apparent at School A while at School B even the significant differences noted do not occur.

No consistent trends are observed in either section of Table XXIVII and so, while it is possible to show significant differences in two sections, the overall conclusion must be that there is no relationship between the parent's occupational status and the sociometric status of his child at school.

Summary. The results of this section show that, while the influence of the environment is undoubtedly a determinant in the formation of personality characteristics which will, in turn, affect a child's social acceptability, no foundation is discovered for the sweeping statements often made. It seems that children from a wide variety of backgrounds can be acceptable or unacceptable to their peers and that teachers might more profitably consider the personality characteristics of each individual, rather than the environmental factors examined here, in their endeavours to assist pupils with problems of social adjustment.

CHAPTER XI

THE RELATIONSHIP BETWEEN A CHILD'S STATUS AND ATTITUDE TOWARDS SCHOOL

Selection of a Rating Scale

To examine the hypothesis that a child who is popular with his school mates is likely to have a more favourable attitude towards school, a rating scale was administered, during 1962, to the total population being tested.

The scale chosen was developed by Professor A.B. Fitt and standardised on Auckland children. It had the advantages of being easy to administer and score, sufficiently simple to be appropriate for all levels being examined and, on a retest by Fitt, of high reliability.

Although the original scale used by Fitt (Appendix F) contained thirty items, he had obtained a correlation of .7 between two scales when the original scale was divided into two, each containing fifteen items. This correlation appeared sufficiently reliable for the purposes of the present study and so a scale of fifteen items was used (Appendix B).

Administration of the Rating Scale

In the instructions, the children were told that the test was to discover how much they liked, or disliked, school. Although Fitt placed particular emphasis upon the fact that the responses were quite anonymous, this was not possible in

the present study since the sociometric category of each child was required to enable comparisons to be made. It was stressed, however, that answers would remain confidential to the experimenter and no irregularities, which might indicate an influencing of responses, were observed on the completed forms.

Interpretation of Results

The results obtained from the Attitude to School Scale must be interpreted with some caution. In the first place, responses could not be recorded anonymously, a requirement stressed by Fitt in the administration of the original scale, and secondly, because the results have been calculated in different class groupings from those used by Fitt.

Fitt grouped Standards 1, 2 and 3 as one unit and Standards 4, 5 and 6 as another when comparing results. This was not adhered to in this study since this grouping would have separated the Standard 4 classes from the lower standards, who attend the same school, and included them with the Form I classes from a completely different educational environment - an intermediate school. Because of this environmental factor, the classes from the contributing school have been considered as one unit in the calculation of results and the Form I classes from the intermediate school as the second group.

In spite of these differences in test administration and

scoring the results appear to be comparable.

Sex Difference

Reference to Table XXXVIII shows that, at the levels tested, the girls have a lower mean score than the boys. The difference at both levels is significant at the .01 level of confidence and supports Fitt's conclusion that girls have a more favourable attitude towards school than boys have.

Difference Between Class Levels

Fitt considered that the differences in attitude toward school between upper and lower primary school classes were slight and not significant. This is supported by the findings in Table XXXIX where again no significant difference is obtained.

Scores Obtained by Different Sociometric Categories

Table XL shows striking similarities in the mean scores for all sociometric categories and indicates that there is no relationship between a child's attitude towards school and his sociometric status.

In view of this finding, the teacher's task of helping unpopular pupils to advance socially would appear easier than might be expected since no negative attitudes to school have to be overcome first. Another interpretation of this result is that the unpopular child finds in the teacher's acceptance of him in the classroom situation a social warmth not exper-

TABLE XXXVIII

SEX DIFFERENCES ON A SCALE OF ATTITUDE TOWARDS SCHOOL

SEX DIFFERENCES (A.B. FITT)

	Standards 1, 2, 3.		Standards 4, 5, 6.	
	Boys	Girls	Boys	Girls
N	139	146	343	238
Mean	4.57	3.77	4.38	3.84
P.E.m0783	.0641	.0432	.0587
Diff.m.....	.80		.54	
P.E. diff...	.1012		.0729	
C.R.	7.9		7.4	

SEX DIFFERENCES (1962)

	Standards 2, 3, 4.		Standard 5.	
	Boys	Girls	Boys	Girls
N	74	70	129	113
Mean	4.25	3.66	4.40	4.25
P.E.m.....	.1196	.0952	.0751	.0946
Diff.m.....	.59		.15	
P.E. diff...	.0343		.0216	
C.R.	11.67		4.68	

TABLE XXXIX
DIFFERENCES FOR SCHOOL CLASS LEVELS ON A SCALE
OF ATTITUDE TOWARDS SCHOOL

	Boys		Girls	
	Std. 2-4	Std. 5	Std. 2-4	Std. 5
N	74	129	70	113
Means	4.25	4.40	3.66	4.25
P.E.m.....	.1192	.0754	.0952	.0947
Diff.m.....	.15		.59	
P.E. diff....	.1416		.0263	
C.R.71		.59	

TABLE XL
 MEAN SCORES IN SOCIOMETRIC CATEGORIES
 ON A STUDY OF ATTITUDE TOWARDS SCHOOL

		Boys			
		Stars	Above Av.	Below Av.	Neg.
S 2-4	Means	3.446	4.718	4.143	4.682
	S.D.	1.576	1.634	1.434	1.106
Form 1	Means	4.364	4.390	4.631	4.117
	S.D.	1.747	1.652	1.502	1.209
		Girls			
		Stars	Above Av.	Below Av.	Neg.
S 2-4	Means	3.350	3.260	4.229	3.690
	S.D.	1.366	1.322	1.337	.919
Form 1	Means	4.400	4.026	4.845	4.222
	S.D.	1.525	1.287	1.803	1.500

ience at other times. Such an interpretation is a commendation of the teacher himself but the ability to make friends with his peers must, of course, be the teacher's wider aim for each child.

CHAPTER XII

DISCUSSION, CONCLUSIONS AND IMPLICATIONS FOR THE CLASSROOM

Discussion

The development, administration, scoring and data obtained from the sociometric test have already been discussed in the text. It is sufficient, here, to note that the results showed the same trends as those found in other research and so it is concluded that the test is reliable in New Zealand conditions and provided a valid classification of pupils.

In the initial outline of the reasons for selecting this topic it was stated that many teachers claimed that sociometry was unnecessary for the estimation of pupil popularity. When faced with the problem of actually assessing the children, however, the teachers who participated in this study were prepared to rate definitely only about two fifths of the children - a slightly lower percentage than that found in a study previously quoted. This alone is indicative that some objective technique is necessary for accurate evaluation but the finding that even those who were confidently rated by the teacher were only slightly more accurately assessed than those of whom the teacher was uncertain clearly shows that unaided observation is not sufficient. The findings in this study, and in those discussed in the review of the literature, suggest

that while teachers vary in their perception of children's relationships, such variation is not related to the teacher's sex nor will years of experience or training alone lessen its inaccuracy. These results establish a case for the use of sociometry by every teacher concerned with the improvement of interpersonal relationships.

Although a high level of teacher awareness of peer popularity is considered a necessity if the school is to be effective in its efforts to socialize the child, a similar level of awareness for the pupils themselves was not found to be a prerequisite for peer acceptance although some relationship was found between such awareness and sociometric status. This finding tentatively supports those outlined previously although from the data obtained in this study, pupil awareness appears to be of less importance as a causative factor in popularity than other investigations have indicated.

Throughout the various possible correlates of high sociometric status which have been investigated, an increasing reflection of the ideals and standards of the society as a whole is found as the age level of the class increases. This was suggested first in the different distributions of sociometric choices between the sexes at different levels - the girls exhibiting more acceptable behavioural characteristics at an earlier age. It has been postulated that the develop-

mental tasks of the boys are less easily fulfilled than those of the girls and that increased attention to the problems experienced by boys, and practical teacher help where possible, is necessary to accelerate the socialization of boys to match that of the girls. To a large extent, however, these tasks are a reflection of social expectations and an alteration of them might need a revaluation on the part of the community itself. In general, the correlates of high acceptability showed a marked similarity to those expected by adult standards and compare favourably with those found to be related to popularity in other studies.

Environmental factors appear to be less likely to influence a child's popularity in New Zealand than they do in other countries. Although the multiplicity of variables which impinge upon a child's developing personality makes any generalization extremely tentative, it seems that differences in socio-economic status of families have little bearing upon the peer acceptance of any one individual. A similar situation is found in relation to the child's placing within the family where again it appears that the unique personality of the individual is of greater importance in the formation of friendships than is family size or the child's ordinal position.

The somewhat surprising finding that the unpopular child

has as favourable an attitude towards school as his more accepted fellows suggests not only that social rehabilitation in the classroom is possible but also that the causes of his unacceptable behaviour lie outside the school. The regular use of sociometric techniques for class grouping could provide the basis for an analysis of causes which would indicate an approach for parental counselling by a visiting teacher as well as pupil counselling by the class teacher himself.

A second aspect of attitude towards school is the improvement of all relationships within the class, not only those experienced by the more unfortunate members. Connor's¹ finding, in a study which is particularly relevant because of its New Zealand setting, that the kind of social 'climate' in each class is related to the class as a unit rather than to the school as a whole, suggests the practicability of the implementation of remedial measures of socialization of children within one class, regardless of conditions in the remainder of the school, and the additional findings that children from a class with a good social climate had better attitudes towards school and better rapport with the teacher also suggest that teacher, and pupil, efficiency can be improved by attention to social factors.

¹Connor, D.V. Behaviour in Class Groups of Contrasting Climate. Brit. J. educ. Psychol., Vol. 30, Pt.III, 1960.

Although a normative approach has been adopted throughout this study, the obvious exceptions to all the generalized results obtained forces an acceptance of Burt's perceptive statement.

The teacher must come down to earth, mix with his pupils on sympathetic terms, and deal with them, not in a mass but as individuals. So far as possible, each child should come to regard him rather as a personal tutor than as a master of the class. Towards each one, and towards the various difficulties that beset them, he must cultivate an attitude that is human as well as scientific.²

This was written in relation to backward children but seems a realistic approach to all the children in a teacher's care - realistic, however, only to the degree that the teacher understands the problems faced by each individual. The results of this present study indicate that many teachers may not appreciate the social problems which some children face and it is for the benefit of these that sociometry is recommended as an essential method of analysis of the class social situation.

Summary and Conclusions

A sociometric survey of an urban primary school was conducted over a two year period and of an intermediate school during the second year of the same period. Teacher and pupil awareness of each child's sociometric status were examined and the relationship between pupil behaviour, environmental factors

²Burt, Sir Cyril. The Causes and Treatment of Backwardness. London, University of London Press Ltd., 1957.

and other possible correlates of high sociometric status were also investigated. The effect of a child's status upon his attitude towards school was also considered.

The major findings of this study may be summarized as follows:

1. The results from a sociometric test administered in two New Zealand schools correspond closely with those of studies reported in other countries and so application of the conclusions from such studies should be appropriate in the New Zealand educational situation.

2. Teachers can estimate, without the use of any objective technique, the level of peer acceptance of a large percentage of their children. It is particularly noted, however, that a significant number of every class is markedly underestimated or overestimated and that the use of an objective technique is a necessity for the accurate assessment of this minority.

3. The teachers' ability to estimate the status of their pupils was unrelated to the sex of the pupils, the teacher's sex or his amount of teaching experience.

4. While there was found to be a relationship between a pupil's own sociometric status and his accuracy in assessing the popularity of his peers, this was not a major factor in social acceptability.

5. Pupil behaviour, as rated by the teachers, showed different characteristics for the popular and the unpopular children. Increasingly favourable ratings were given to both boys and girls at the upper school levels while a concurrent increase in the seriousness of deviant behaviour was found for the unpopular children of both sexes.

6. Men teachers, according to their own ratings, experience slightly more problem behaviour from children than do women teachers but they found fewer pupils to be antisocial. It has been suggested that different emphases cause these discrepancies.

7. There is a highly significant relationship between the possession of some desirable traits and popularity and an indication that the absence of such traits causes unpopularity.

8. Aspects of the environment dealt with in this study, while admitted as factors affecting personality development, have not been shown to be major determinants of a child's social status.

9. A child's sociometric status is unrelated to his attitude towards school.

Implications for the Classroom

The continually broadening facets of education which are becoming the responsibility of the primary school add to the complexity of the teacher's task. If it is accepted that

the personality development and socialization of each child are, to a large extent, the responsibility of the school in our society then the practical measures taken to fulfil such aims should be as soundly based upon objective analysis as those related to academic subjects. The findings of this study suggest that such a basis can be found through the use of sociometric techniques. Implicit in these findings is the recommendation of sociometry as a technique for use by the practical teacher in the classroom situation to assist in the analysis of social problems, the setting of realistic and acceptable goals, the efficient working of groups and the improvement of interpersonal relationships.

BIBLIOGRAPHICAL ENTRIES

A. BOOKS

- Berrien, F.K. and Bash, Wendall. H. Human Relations: Comments and Cases. New York: Harper and Brothers, 1957.
- Bloom, Benjamin S. Stability and Change in Human Characteristics. New York: John Wiley and Sons, Inc., 1964.
- Bowlby, John. Maternal Care and Mental Health. New York: Columbia University Press, 1957.
- Brim, Orville G. Sociology and the Field of Education. New York: Russell Sage Foundation, 1958.
- Brubacher, John S. Modern Philosophies of Education. New York: McGraw-Hill Book Company, Inc., 1950.
- Burt, Sir Cyril. The Causes and Treatment of Backwardness. London: University of London Press Ltd., 1957.
- Cantril, Hadley. Understanding Man's Social Behaviour. (Preliminary Notes.) New Jersey: Office of Public Opinion Research, Princetown, 1947.
- Chapin, Stuart F. and Conway, Margaret I. 'The Social Group in Education' in The Grouping of Pupils. Thirty-fifth Yearbook, 1936, Pt.I. National Society for the Study of Education.
- Coladarci, Arthur P. Educational Psychology: a Book of Readings. New York: The Dryden Press, Inc., 1955.
- Dewey, John. Democracy and Education. New York: The Macmillan Company, 1916.
- Drever, James. A Dictionary of Psychology. Middlesex: Penguin Books, 1952.
- Gronlund, Norman E. Sociometry in the Classroom. New York: Harper and Brothers, 1959.
- Hare, A. Paul. Handbook of Small Group Research. New York: The Free Press of Glencoe, 1962.

- Havighurst, Robert J. Human Development and Education. New York: Longman, Green and Co., 1953.
- Havighurst, Robert J. Studies of Children and Society in New Zealand. Christchurch: Canterbury University College, 1954.
- Landreth, Catherine. The Psychology of Early Childhood. New York: Alfred Knopf, 1958.
- Laughlin, Francis. The Peer Status of Sixth and Seventh Grade Children. New York: Bureau of Publications, Teachers' College, Columbia University, 1954.
- Lawrence, P.J. (Ed.) Mental Health and the Community. Christchurch: Canterbury Mental Health Council, 1963.
- Lifton, Walter M. Working with Groups. New York: John Wiley and Sons Inc., 1962.
- Michelmores, Peter. Einstein - Profile of the Man. London: Frederick Muller Ltd., 1963.
- Moreno, J.L. (Ed.) The Sociometry Reader. New York: The Free Press of Glencoe, 1960.
- Moreno, J.L. Who Shall Survive? New York: Beacon House Inc., 1953.
- Peck, Robert F. and Havighurst, Robert J. The Psychology of Character Development. New York: John Wiley and Sons, Inc., 1960.
- Piaget, Jean. The Moral Judgment of the Child. London: Routledge and Kegan Paul Ltd., 1932.
- Rivlin, Harry W. Educating for Adjustment. New York: D. Appleton-Century Company, Inc., 1936.
- Sherif, Muzaffer and Wilson, M.O. (Ed.) Group Relations at the Crossroads. New York: Harper and Brothers, 1953.
- Wheeler, Dame Olive, Phillips, William and Spillane, Joseph P. Mental Health and Education. London: University of London Press, 1961.

B. PERIODICALS

- Austin, M.C. and Thompson, G.G. (1948), Children's friendships: a study of the bases on which children select and reject their best friends. J. educ. Psychol., 39, 101-116.
- Bell, C.B. and Hall, H.E. (1954), The relationship between leadership and empathy. J. abnorm. soc. Psychol., 49, 156-7.
- Blyth, W.A.L. (1960), The sociometric study of children's groups in English schools. Brit. J. educ. Studies, 8.
- Bonney, Merl E. (1942), A study of the relation of intelligence, family size, and sex differences with mutual friendships in the primary grades. Child Developm., 13.
- Bonney, Merl E. (1943), Personality traits of socially successful and socially unsuccessful children. J. educ. Psychol., 34, 449-472.
- Bonney, Merl E. (1944), Sex differences in social success and personality traits. Child Developm., 15.
- Bryne, P. (1961), The influence of propinquity and opportunities for interaction on classroom relationships. Hum. Relat., 14, 63-70.
- Campbell, W.J. (1955), The social acceptability of over-age and under-age pupils. N.E. Bull. Psychol., 2, 56-
- Campbell, J.D. and Yarrow, M.R. (1961), Perceptual and behavioural correlates of social effectiveness. Sociometry, 24, 1-21.
- Connor, D.V. (1960), Behaviour in class groups of contrasting climates. Brit. J. educ. Psychol., 30, 244-249.
- Croft, I.J. and Grygier, T.G. (1956), Social relationships of truants and juvenile delinquents. Hum. Relat., 9, 439-466.
- Davis, J.A. (1957), Correlates of sociometric status amongst peers. J. educ. Res., 50, 561-570.
- Dentler, R.A. and Mackler, B. (1963), Effects on sociometric status of institutional pressure to adjust among retarded children. Brit. J. soc. clin. Psychol., 2, 81-89.

- DeVault, M.V. (1957), Classroom sociometry: mutual pairs and residential proximity. J. educ. Res., 50, 605-610.
- Dobbs, H.A. (1950), The classroom teacher and delinquency prevention. Elementary School Journal, 50, 376-383.
- Drawhorn, Curtis. (1956), A study of the sociometric hierarchy of elementary education majors. J. educ. Res., 50, 287-296.
- Durkin, Delores. (1959), Children's concept of justice: a further comparison with Piaget data. J. educ. Res., 52, 252-257.
- Evans, K.M. (1959), The teacher-pupil relationship. Educ. Res. 2.
- Exline, Ralph. (1960), Interrelations among two dimensions of sociometric status, group congeniality and accuracy of social perception. Sociometry, 23, 85-101.
- Gardner, Godfrey. (1956), Functional leadership and popularity in small groups. Hum. Relat., 9, 491-509.
- Greer, F.L., Galanter, E.H. and Nordlie, P.G. (1954), Interpersonal knowledge and individual and group effectiveness. J. abnorm. soc. Psychol., 49, 411-414.
- Gronlund, Norman E. (1955), Generality of sociometric status over criteria in measurement of social acceptability. Elementary School Journal, 56, 173-176.
- Gronlund, Norman E. (1955b), The relative stability of classroom social status with unweighted and weighted sociometric status scores. J. educ. Psychol., 46, 345-354.
- Gronlund, Norman E, and Whitney, A.P. (1958), The relation between teachers' judgments of pupil's sociometric status and intelligence. Elementary School Journal, 59.
- Hardy, Martha C. (1937), Social recognition at the elementary school age. J. soc. Psychol., 8, 365-386.
- Jenkins, G.G. (1931), Factors involved in children's friendships. J. educ. Psychol., 22, 440-448.

- Lindgren, Henry C., and Guedes, Hilda De A. (1963), Social status, intelligence, and educational achievement among elementary and secondary students in Sao Paulo, Brazil. J. soc. Psychol., 60, 9-14.
- Lippitt, R., Polansky, and Rosen, S. (1952), The dynamics of power: a field study of social influence in groups of children. Hum. Relat., 5, 37-64.
- McFarlane, J.W., Honzik, M.P. and Davis, M.H. (1937), Reputation of differences among young school children. J. educ. Psychol., 28, 161-175.
- Neugarten, B.L. (1946), Social class and friendship among school children. Amer. J. Sociol., 51, 305-313.
- Norman, R.D. (1953), The interrelationships among acceptance-rejection, self-other identity, insight into self, and realistic perception of others. J. soc. Psychol., 37, 205-235.
- Polansky, N., Lippitt, R. and Redl, F. (1950), An investigation of behaviour contagion in groups. Hum. Relat., 3, 319-348.
- Porterfield, O.V. and Schlichting, H.F. (1961), Peer status and reading achievement. J. educ. Res., 54, 291-297.
- Rosefeld, H.M. (1946), Social choice conceived as level of aspiration. J. abnorm. soc. Psychol., 68, 491-499.
- Sanders, C. (1948), Insecurity and social maladjustment in children. Brit. J. educ. Psychol., 18, 148-155.
- Sewell, William H. (1961), Social class and childhood personality. Sociometry, 24, 340-356.
- Shaw, H.A. (1954), A study of popular and unpopular children. Educ. Rev., 6, 208-220.
- Sherif, Muzafer. (1949), Experiments in group conflict. Scientific American: Readings in Psychology. San Francisco: W.H. Freeman and Company, 1949.
- Slavson, S.R. (1949), Group psychotherapy. Scientific American: Readings in Psychology. San Francisco: W.H. Freeman and Company, 1949.

- Staines, J.W. (1958), The self-picture in the classroom. Brit. J. educ. Psychol., 28, 97-111.
- Steiner, I.D. (1955), Interpersonal behaviour as influenced by accuracy of social perception. Psychol. Rev., 62, 268-274.
- Taylor, E.A. (1952), Some factors relating to social acceptance in eighth grade class rooms. J. educ. Res., 43, 257-272.
- Thorpe, J.G. (1959), The value of teachers' ratings of the adjustment of their pupils. Brit. J. educ. Psychol., 29, 207-212.
- Tuddenham, R.D. (1951), Studies in reputation. 111. Correlates of popularity among elementary school children. J. educ. Psychol., 42, 257-276.
- Volberding, Eleanor. (1949), Characteristics of successful and unsuccessful eleven year old pupils. Elementary School Journal, 49, 405-
- Winder, G.L. and Rau, Lucy. (1962), Parental attitudes associated with social deviance in pre-adolescent boys. J. abnorm. soc. Psychol., 64, 418-424.
- Young, L.L. and Cooper, D.H. (1944), Some factors associated with popularity. J. educ. Psychol., 35, 513-535.

APPENDIX

APPENDIX A

GROUP GROWTH

The following list is taken from Walter M. Lipton's book, *Working with Groups* p.164-165 and summarizes the characteristics which "almost all" authors consider to be characteristic of mature groups.

1. An ever increasing ability to be self-directed (not dependent on leader).
2. An increased tolerance in accepting that progress takes time.
3. An increasing sensitivity to their own feelings and the feelings of others.
4. Marked improvement in the ability to withstand tension, frustration and disagreement.
5. Perceptive of the common denominators which bind the group as well as areas of individual difference.
6. A better ability to anticipate realistic results of behaviour and to channel emotions into more socially acceptable ways of expressing these emotions.
7. An increased ability to change plans and methods as new situations develop.
8. Less time needed to recover from threatening group situations. Peaks and valleys of emotional group crises become less pronounced.
9. Increased efficiency in locating problems, engaging in problem solving, and providing help to individuals as needed.
10. Prestige in group now comes from willingness to face own responsibilities and to assist others when help is needed.
11. Acceptance of the right of the other person to be different.
12. Acceptance of the idea that people are different.

APPENDIX B

TEST FORMS

My name is _____ Class _____

Remember !

1. Your choice must be from children in this room including those who are away today.
2. Make five choices for each section.
3. Your choices will not been seen by any other children.

I would like to sit beside these children in school.

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____

These are the children I would most like to play with.

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____

If I were allowed to, I would like to have these children home to stay with me for a weekend.

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____

WHICH PEOPLE HAVE THE MOST FRIENDS
IN YOUR CLASS?

NAME _____ CLASS _____

This form is to find out how well you can guess which people, in this room, received the most choices on the form which you filled in for me a few days ago.

Write down the names of the five Boys, and the five Girls whom you think received the most choices.

BOYS

GIRLS

1 _____	1 _____
2 _____	2 _____
3 _____	3 _____
4 _____	4 _____
5 _____	5 _____

Now try to guess who would be the next five Boys and the next five Girls in the number of choices received.

BOYS

GIRLS

6 _____	6 _____
7 _____	7 _____
8 _____	8 _____
9 _____	9 _____
10 _____	10 _____

DEFINITIONS FOR 'BEHAVIOUR RATING SCALE'

The attached rating scale is designed to measure to what extent each child is (a) a disciplinary problem in school,
(b) sociable or antisocial in his/her relationships with peers.

There are three main columns.

1. Problem. Those children who often disturb the routine of the classroom through general noisiness, reluctance to work, etc.

2. Normal. Those children who, although they may cause minor difficulty at times, are usually reasonably quiet and attentive.

3. Quiet. Those children who seldom talk in school, and who seldom disturb the class routine in any way.

Each of these columns has been subdivided into two.

(a) Sociable. Gets on well with his peers most of the time.

(b) Antisocial. Tends to annoy others; often concerned in petty bickering, arguments, fights, etc.

Would you please put only one tick for each child rated.

BEHAVIOUR RATING SCALE

Problem		Normal		Quiet	
Sec.	Anti.	Sec.	Anti.	Sec.	Anti.

[illegible]

"GUESS WHO?" TEST (FORM A)

Each of these sentences could be about someone in this room. Answer each one in order and try to think which person in this room it is most like.

Class

My name is

1. This person often helps others. _____
2. This person does not usually
help others. _____
3. This person usually goes to church. _____
4. This person hardly ever goes to church. _____
5. This person is a good loser. _____
6. This person is not a good loser. _____
7. This person is always kind. _____
8. This person is not usually kind. _____
9. This person is always well behaved. _____
10. This person often misbehaves. _____
11. This person likes the same things as I do.

12. This person does not like the same things that I do.

13. This person often gets the pip. _____
14. This person does not get the pip. _____
15. This person always tries hard. _____
16. This person does not try hard. _____
17. This person grumbles and complains. _____
18. This person does not grumble or complain.

19. This person is sympathetic. _____
20. This person is not sympathetic. _____
21. This person is a spoil sport. _____
22. This person is not a spoil sport. _____
23. This person is well mannered. _____

Class

24. This person is not well mannered. _____
25. This person is clever. _____
26. This person is not very clever. _____
27. This person loses his temper easily. _____
28. This person never loses his temper. _____
29. This person never skites. _____
30. This person often skites. _____
31. This person is always playful. _____
31. This person is not very playful. _____
32. This person uses bad language. _____
33. This person never uses bad language. _____
34. This person is a cry-baby. _____
35. This person is not a cry-baby. _____
36. This person is not jealous. _____
37. This person is often jealous. _____
38. This person can see the funny side of things. _____

39. This person does not usually see the funny side of
things. _____

40. I have known ^{him} her for a long time. _____

41. I have not known ^{her} her ^{him} for very long. _____

My name is

42. This person is always obedient. _____

43. This person is often disobedient. _____

44. This person is always friendly. _____

45. This person is never friendly. _____

46. This person always owns up. _____

47. This person never owns up. _____

48. This person often gets into mischief. _____

49. This person never gets into mischief. _____

50. This person never tells lies. _____

51. This person often tells lies. _____

Class

52. This person always respects adults. _____
53. This person does not respect adults. _____
54. This person often has rows. _____
55. This person never has a row. _____
56. This person is very good-natured. _____
57. This person is not good-natured. _____
58. This person does not tease. _____
59. This person often teases people. _____
60. This person never gives orders. _____
61. This person often gives orders. _____
62. This person does things without being asked. _____

63. This person always has to be asked to do things. _____

64. This person does not interfere. _____

65. This person often interferes. _____

66. This person is always thankful for anything done for
him
her _____

67. This person is never thankful. _____

68. This person has the same hobbies as I have. _____

My name is

69. This person is often fighting. _____

70. This person never fights. _____

71. This person always shares things. _____

72. This person never shares things. _____

73. This person comes from a good home. _____

74. This person always dresses neatly. _____

75. This person is always sensible. _____

76. This person often invites me to parties. _____

Class

My name is

77. This person is never cowardly. _____
78. This person often gives you things. _____
79. This person is very good-looking. _____
80. This person lives near me. _____
81. I have liked this person for a long time. _____

REMEMBER. THIS FORM IS CONFIDENTIAL. NO ONE EXCEPT
THE EXAMINER WILL SEE IT.

"GUESS WHO?" TEST (FORM B)

BOYS

Each of these sentences could be about someone in this room. Answer each one in order and try to think of the people in this room which these sentences best describe. You may name up to five people for each item.

Class

1. These people often help others. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____

2. These people do not usually help others. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____

3. These people always try hard. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____

4. These people do not usually try hard. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____

5. These people are clever. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____

Name

6. These people are not very clever. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____

7. These people are never cowardly. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____

8. These people are good losers. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____

Class

Name

9. These people never own up. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____
10. These people are always obedient. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____
11. These people are very good-looking. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____
12. These people are often fighting. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____
13. These people are not very playful. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____
14. These people are not good losers. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____
15. These people are not 'spoil sports'. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____
16. These people often disturb the class through general noisiness. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____
17. These people are very quiet and seldom disturb the class. 1 _____
 2 _____ 3 _____
 4 _____ 5 _____

Class

Name

18. These people are very good at sports.

2 _____

4 _____

1 _____

3 _____

5 _____

19. These people are not very good at sports.

2 _____

4 _____

1 _____

3 _____

5 _____

Each of these statements could be about some people in this room. Answer each one in order and try to think of the people in this room which these sentences best describe. You may name up to five people for each item.

Class

Name

9. These people are always thankful for anything done for them.
- 1 _____
2 _____ 3 _____
4 _____ 5 _____
10. These people are never thankful for anything done for them.
- 1 _____
2 _____ 3 _____
4 _____ 5 _____
11. These people are very good-natured.
- 1 _____
2 _____ 3 _____
4 _____ 5 _____
12. These people always have to be asked to do things.
- 1 _____
2 _____ 3 _____
4 _____ 5 _____
13. These people are very good-looking.
- 1 _____
2 _____ 3 _____
4 _____ 5 _____
14. These people never use bad language.
- 1 _____
2 _____ 3 _____
4 _____ 5 _____
15. These people are always sensible.
- 1 _____
2 _____ 3 _____
4 _____ 5 _____
16. These people often disturb the class through general noisiness.
- 1 _____
2 _____ 3 _____
4 _____ 5 _____
17. These people seldom disturb the class.
- 1 _____
2 _____ 3 _____
4 _____ 5 _____

Class

18. These people are very good at sports.

2 _____

4 _____

1 _____

3 _____

5 _____

19. These people are not very good at sports.

2 _____

4 _____

1 _____

3 _____

5 _____

Name

DIRECTIONS AND DEFINITIONS FOR USE WITH THE POPULARITY
RATING SCALE

The attached rating scale has been divided into two sections: (a) The five column block, in which the teacher is asked to tick the column most appropriate for each child. Definitions for each category appear below.

(b) The three column block, which has been designed to indicate the level of confidence with which the teacher makes the assessment for each child.

Definitions for the Rating of Popularity

Star. A very popular child whom you would expect to receive choices from about nine or more other children. On good terms with most and usually one of the first chosen as a companion for work or recreational activities.

Above Average. A child receiving several choices. One who is usually a member of a group.

Average. One who has perhaps three or four consistent friendships but who does not attract groups of friends. A "down the list" choice for activities, but not avoided.

Neglectee. A child whom you would expect to receive few choices from other children. One who is on the 'fringe' of groups but who is not really a vital member. May have a steady friend but, in general, is one of the last chosen for games and activities.

Isolate. One whom you would not expect to receive any choices, i.e. unpopular as a seating companion or as a member of a group for games or work. May sit alone at lunchtimes etc. Ignored or actively disliked by many other children.

Please tick also the Level of Confidence Scale to indicate how accurate you consider your assessment to be.

LEVEL OF
CONFIDENCE SCALE.

[illegible]

Name _____ Class _____

A STUDY OF ATTITUDE TOWARDS SCHOOL

This is not an examination. There are no right or wrong answers to these statements. It is simply a study of what you really think about school. Please tick off the statements where you agree and place a cross where you do not agree.

- Put a tick if you agree with a statement.
 - X - Put a cross if you do not agree with a statement.
 - ? - If you cannot decide, write a question mark.
1. I like school better than anything else.
 2. If I had my way I would never go to school.
 3. I like everything about school.
 4. We have to work too hard at school.
 5. We are lucky to have schools to go to.
 6. I would sooner work at home or somewhere else than at school.
 7. In school we learn a lot of things which are of no use.
 8. I like school because it keeps us out of mischief.
 9. I enjoy every minute of school but am glad when the holidays come.
 10. I like to hear people saying nice things about school.
 11. I like school just a little.
 12. There is too much work at school.
 13. I shall leave school as soon as I am allowed to.
 14. We do not have enough play at school.
 15. Sometimes I think going to school is good and sometimes I think it is useless.

APPENDIX C

TABLES RELATED TO SOCIOMETRIC TESTS

TABLE XLI

NUMBER OF CASES IN EACH SOCIOMETRIC CATEGORY

WITHIN EACH SCHOOL CLASS (BOYS)

School A (1961)

Class	Stars	Above Av.	Below Av.	Neglectees
Std. 4	5	3	6	5
Std. 4	2	9	6	3
Std. 3	3	6	10	2
Std. 3/2	3	8	3	4
Std. 2	0	7	3	1
Std. 2	3	9	11	1
Totals	16	42	39	16

School A (1962)

Class	Stars	Above Av.	Below Av.	Neglectees
Std. 4	2	7	9	3
Std. 3/4	2	7	11	0
Std. 3	6	5	4	8
Std. 2/3	4	4	7	1
Totals	14	23	31	12

School B

Stream	Stars	Above Av.	Below Av.	Neglectees
A	1	8	11	0
B	3	6	11	1
C	1	4	10	2
C	3	6	5	3
D	2	6	9	1
D	2	9	10	2
E	2	7	7	4
Totals	14	46	63	13

TABLE XLII
 NUMBER OF CASES IN EACH SOCIOMETRIC CATEGORY
 WITHIN EACH SCHOOL CLASS (GIRLS)

School A (1961)

Class	Stars	Above Av.	Below Av.	Neglectees
Std. 4	3	5	8	3
Std. 4	0	5	4	1
Std. 3	3	5	6	3
Std. 3/2	4	5	8	2
Std. 2	2	5	7	1
Std. 2	1	6	5	2
Totals	13	31	38	12

School A (1962)

Class	Stars	Above Av.	Below Av.	Neglectees
Std. 4	3	7	9	3
Std. 3/4	1	9	6	2
Std. 3	2	10	5	4
Std. 2/3	2	4	6	1
Totals	8	30	26	10

School B

Stream	Stars	Above Av.	Below Av.	Neglectees
A	2	9	10	2
B	0	14	6	1
C	1	10	3	2
C	1	11	10	1
D	2	6	5	1
D	0	7	3	1
E	0	6	4	1
Totals	6	63	41	9

TABLE XLIII

PERCENTAGE OF CHILDREN IN EACH SOCIOMETRIC CATEGORY

WITHIN EACH SCHOOL CLASS

School A (1961)

Class	Stars	Above Av.	Below Av.	Neglectees
Std. 4	21.05	21.05	36.85	21.05
Std. 4	6.67	46.67	33.33	13.33
Std. 3	15.79	28.95	42.11	13.15
Std. 3/2	18.92	35.14	29.73	16.21
Std. 2	7.69	46.16	38.46	7.69
Std. 2	10.52	39.47	42.11	7.90
Total	14.01	35.27	37.20	13.52

School A (1962)

Class	Stars	Above Av.	Below Av.	Neglectees
Std. 4	11.62	32.55	41.86	13.97
Std. 3/4	7.90	42.11	44.72	5.27
Std. 3	18.18	34.09	20.46	27.27
Std. 2/3	20.69	27.59	44.82	6.90
Total	14.28	34.42	37.01	14.29

School B

Stream	Stars	Above Av.	Below Av.	Neglectees
A	6.98	39.53	48.85	4.64
B	7.14	47.62	40.48	4.76
C	6.06	42.42	39.40	12.12
C	10.00	42.50	37.50	10.00
D	12.50	37.50	43.75	6.25
D	5.88	47.06	38.23	8.83
E	6.45	41.94	35.48	16.13
Total	7.84	42.75	40.78	8.63

TABLE XLIV
 PERCENTAGE OF BOYS IN EACH SOCIOMETRIC CATEGORY
 WITHIN EACH SCHOOL CLASS

School A (1961)

Class	Stars	Above Av.	Below Av.	Neglectees
Std. 4	15.79	26.32	42.10	15.79
Std. 4	10.00	45.00	30.00	15.00
Std. 3	14.29	28.57	47.62	9.52
Std. 3/2	16.67	44.44	16.67	22.22
Std. 2	-	63.64	27.27	9.09
Std. 2	12.50	37.50	45.83	4.17
Total	14.16	37.17	34.51	14.16

School A (1962)

Class	Stars	Above Av.	Below Av.	Neglectees
Std. 4	9.52	33.33	42.86	14.29
Std. 3/4	10.00	35.00	55.00	-
Std. 3	26.09	21.74	17.39	34.78
Std. 2/3	25.00	25.00	43.75	6.25
Total	17.50	28.75	38.75	15.00

School B

Stream	Stars	Above Av.	Below Av.	Neglectees
A	5.00	40.00	55.00	-
B	14.29	28.58	52.37	4.76
C	5.88	23.53	58.83	11.76
C	17.64	35.29	29.42	17.65
D	11.11	33.33	50.00	5.56
D	8.69	39.14	43.48	8.69
E	10.00	35.00	35.00	20.00
Total	10.29	33.83	46.33	9.55

TABLE XLV
 PERCENTAGE OF GIRLS IN EACH SOCIOMETRIC CATEGORY
 WITHIN EACH SCHOOL CLASS

School A (1961)

Class	Stars	Above Av.	Below Av.	Neglectees
Std. 4	15.79	26.32	42.10	15.79
Std. 4	-	50.00	40.00	10.00
Std. 3	17.65	29.41	35.29	5.88
Std. 3/2	21.05	26.32	42.10	10.53
Std. 2	13.33	33.33	46.67	6.67
Std. 2	7.14	42.86	35.71	14.29
Total	13.83	32.98	40.43	12.76

School A (1962)

Class	Stars	Above Av.	Below Av.	Neglectees
Std. 4	13.64	31.81	40.91	13.64
Std. 3/4	5.56	50.00	33.33	11.11
Std. 3	9.52	47.62	23.81	19.05
Std. 2/3	15.39	30.77	46.15	7.69
Total	10.81	40.54	35.14	13.51

School B

Stream	Stars	Above Av.	Below Av.	Neglectees
A	8.69	39.14	43.48	8.69
B	-	66.67	28.57	4.76
C	6.25	62.50	18.75	12.50
C	4.35	47.82	43.48	4.35
D	14.28	42.86	35.72	7.14
D	-	63.64	27.27	9.09
E	-	54.55	36.36	9.09
Total	5.05	52.94	34.45	7.56

TABLE XLVI

PERCENTAGE OF PUPILS CHOSEN ABOVE AND BELOW EXPECTED VALUE
 USING THE AVERAGE SCORE OF THREE SOCIOMETRIC CRITERIA
 WITH FIVE SOCIOMETRIC CHOICES

School A (1961)

Percentage of Pupils

Class	Above Expected Value	Below Expected Value
Std. 4	42.10	57.90
Std. 4	53.34	46.66
Std. 3	44.74	55.26
Std. 3/2	54.06	45.94
Std. 2	53.85	46.15
Std. 2	49.99	50.01
Total	49.28	50.72

School A (1962)

Percentage of Pupils

Class	Above Expected Value	Below Expected Value
Std. 4	44.17	55.83
Std. 3/4	50.01	49.99
Std. 3	52.27	47.73
Std. 2/3	48.28	51.72
Total	48.70	51.30

School B

Percentage of Pupils

Stream	Above Expected Value	Below Expected Value
A	46.51	53.49
B	54.76	45.24
C	48.48	51.52
C	52.50	47.50
D	50.00	50.00
D	52.94	47.06
E	48.39	51.61
Total	50.59	49.41

APPENDIX D

ESTIMATION OF PUPIL STATUS TABLES

TABLE XLVII

TEACHERS' ESTIMATION OF EACH CHILD'S SOCIOMETRIC STATUS
(Separate Results for Men and Women Teachers)

WOMEN TEACHERS' ESTIMATE OF BOYS

Class	No. of Tchrs.	+ 2	+ 1	Accurate	- 1	- 2	- 3
S 2-4 (1961)	2		36.67	26.66	36.67	-	-
S 2-4 (1962)	2	2.44	21.95	12.20	34.15	24.39	4.87
Form I	4	5.56	16.67	43.06	26.38	8.33	-

WOMEN TEACHERS' ESTIMATE OF GIRLS

S 2-4 (1961)	2	5.88	14.71	52.94	20.59	5.88	-
S 2-4 (1962)	2	2.56	2.56	28.21	48.72	15.39	2.56
Form I	4	-	12.90	37.10	38.71	11.29	-

MEN TEACHERS' ESTIMATE OF BOYS

S 2-4 (1961)	3	3.23	16.13	41.94	32.26	6.44	-
S 2-4 (1962)	2	-	18.92	48.65	24.32	8.11	-
Form I	3	3.17	14.29	31.75	39.68	9.52	1.59

MEN TEACHERS' ESTIMATE OF GIRLS

S 2-4 (1961)	3	-	13.95	32.56	34.89	18.60	-
S 2-4 (1962)	2	-	14.29	45.71	37.14	2.86	-
Form I	3	1.82	14.55	32.73	36.36	12.72	1.82

TABLE XLVIII
 DEVIATION OF TEACHERS' ESTIMATES FROM THE CHILDREN'S
 ACTUAL SOCIOMETRIC STATUS IN RELATION TO
 THE CONFIDENCE OF ESTIMATE SCALE

DEFINITE (Boys)						
Class	+2	+1	0	-1	-2	-3
S2-4 (61)	-	27.08	45.12	25.00	2.80	-
S2-4 (62)	-	33.33	14.29	38.09	14.29	-
Form I	4.17	14.58	41.67	33.33	6.25	-
DEFINITE (Girls)						
Class	+2	+1	0	-1	-2	-3
S2-4 (61)	2.44	14.64	39.02	26.83	17.07	-
S2-4 (62)	-	7.69	38.46	53.85	-	-
Form I	2.18	19.56	32.61	32.61	13.04	-
PROBABLE (Boys)						
Class	+2	+1	0	-1	-2	-3
S2-4 (61)	2.78	22.22	33.33	38.89	2.78	-
S2-4 (62)	2.44	14.63	34.15	31.71	14.63	2.44
Form I	4.23	16.90	35.21	35.21	8.45	-
PROBABLE (Girls)						
Class	+2	+1	0	-1	-2	-3
S2-4 (61)	3.57	14.29	35.71	35.71	10.72	-
S2-4 (62)	2.22	8.88	40.00	35.55	11.11	2.22
Form I	-	11.29	35.48	41.94	9.68	1.61

TABLE XLVIII (Continued)

UNCERTAIN (Boys)

Class	+2	+1	0	-1	-2	-3
S2-4 (61)	12.50	-	-	62.50	25.00	-
S2-4 (62)	-	13.33	40.00	13.33	26.67	6.67
Form I	6.67	13.33	33.33	20.00	20.00	6.67

UNCERTAIN (Girls)

Class	+2	+1	0	-1	-2	-3
S2-4 (61)	-	12.50	75.00	12.50	-	-
S2-4 (62)	-	5.88	23.53	52.94	11.77	5.88
Form I	-	-	44.50	33.30	22.20	-

APPENDIX E

"GUESS WHO?" TEST SCORES

TABLE XLIX

"GUESS WHO? TEST FORM A" COMBINED TOTALS OF ALL CLASSES:
AVERAGE NUMBER OF TIMES EACH ITEM WAS ATTRIBUTED
TO VARIOUS SOCIOMETRIC CATEGORIES

BOYS										
Item No.	1	2	3	4	5	6	7	8	9	10
Stars	2.5	.6	1.4	.7	2.8	2.5	1.5	1.0	2.3	.8
Above Av.	1.1	.9	.9	.9	1.0	1.0	1.0	.9	.8	1.8
Below Av.	.3	.5	.5	1.0	.7	.9	.5	.8	.6	.8
Neglectees	.4	2.8	.4	2.0	.9	.9	.4	1.5	.5	1.8

GIRLS										
Item No.	1	2	3	4	5	6	7	8	9	10
Stars	1.7	-	2.7	.4	1.5	.5	2.5	.4	1.5	.2
Above Av.	1.3	.8	1.1	.7	.9	1.0	1.5	.9	1.7	.4
Below Av.	.7	1.3	1.0	.9	.8	.5	-	1.3	.7	.7
Neglectees	.3	.2	.2	1.0	.3	.5	-	.6	.2	.7

TABLE XLIX (Continued)

BOYS

Item No.	11	12	13	14	15	16	17	18	19	20
Stars	1.4	1.2	1.4	2.2	3.0	.2	1.2	2.0	1.5	1.0
Above Av.	1.1	.8	1.0	.8	.9	.8	.7	1.0	.9	1.1
Below Av.	.7	.8	.5	.5	.5	.8	.9	.5	.5	.9
Neglectees	.7	.5	.5	.5	.5	2.7	.7	.3	.3	1.0

GIRLS

Item No.	11	12	13	14	15	16	17	18	19	20
Stars	1.7	.9	.5	1.5	1.4	.1	.5	1.8	2.2	.4
Above Av.	.9	.8	1.5	1.5	1.1	.9	.9	1.3	1.8	.5
Below Av.	.7	1.2	1.1	.8	.9	1.3	1.5	.7	.7	1.1
Neglectees	.7	1.0	1.5	.6	.2	.8	1.0	.5	.5	1.7

TABLE XLIX (Continued)

BOYS

Item No.	21	22	23	24	25	26	27	28	29	30	31
Stars	.7	2.4	1.7	.5	3.7	.5	1.4	1.7	1.8	1.0	2.0
Above Av.	.8	1.1	1.0	1.2	1.4	.9	1.1	1.2	1.1	.6	1.1
Below Av.	.7	.7	.5	1.1	.5	1.3	1.0	1.0	.8	.8	.5
Neglectees	1.2	.1	.6	1.8	.2	1.7	1.2	1.2	.5	1.2	.6

GIRLS

Item No.	21	22	23	24	25	26	27	28	29	30	31
Stars	.3	1.1	2.5	.1	1.0	-	.1	1.3	1.7	.6	1.3
Above Av.	1.3	1.0	1.2	.4	.9	.6	.7	1.0	1.4	1.5	1.2
Below Av.	1.0	.9	.8	.9	.6	1.3	1.0	.4	.7	1.0	.9
Neglectees	1.3	.5	.5	1.0	.1	.4	1.0	.1	.3	1.8	-

TABLE XLIX (Continued)

BOYS

Item No.	31a	32	33	34	35	36	37	38	39	40
Stars	.7	1.7	1.7	.5	3.0	1.3	1.5	2.0	1.2	1.5
Above Av.	.8	1.7	1.0	.2	.8	1.2	.8	1.2	1.0	1.2
Below Av.	1.0	.7	.7	.9	.6	.9	.7	.8	.7	.7
Neglectees	1.3	1.6	.6	1.3	.5	.2	1.0	.6	1.1	.2

GIRLS

Item No.	31a	32	33	34	35	36	37	38	39	40
Stars	.8	.1	2.1	1.0	1.9	1.3	.5	1.5	.5	1.8
Above Av.	.6	.5	1.4	1.3	1.2	1.1	1.1	1.0	1.1	1.1
Below Av.	1.0	.6	.5	1.5	.6	.7	.9	.5	.9	.7
Neglectees	1.5	.7	.3	1.5	.4	.3	1.3	.5	.6	.6

TABLE XLIX (Continued)

BOYS

Item No.	41	42	43	44	45	46	47	48	49	50
Stars	1.0	2.6	1.0	2.1	.9	2.0	1.0	1.5	2.0	2.0
Above Av.	1.1	1.0	1.1	1.0	1.0	1.3	1.2	1.5	1.0	1.0
Below Av.	1.0	.7	.9	.7	.8	.7	1.0	1.0	.4	.6
Neglectees	1.3	.6	1.8	.5	1.5	.8	2.6	1.0	.8	.6

GIRLS

Item No.	41	42	43	44	45	46	47	48	49	50
Stars	1.0	1.5	.3	1.4	.4	1.1	.3	.4	1.8	1.8
Above Av.	.9	1.1	.5	1.1	.6	1.0	.4	.5	1.0	1.2
Below Av.	.4	.7	.8	.9	1.2	.4	.6	.7	.8	.8
Neglectees	1.2	.2	1.2	.6	1.0	.4	1.0	.8	.3	.4

TABLE XLIX (Continued)

BOYS

Item No.	51	52	53	54	55	56	57	58	59	60
Stars	1.1	1.9	1.1	1.4	1.8	2.0	1.1	1.4	2.2	1.8
Above Av.	.8	.8	1.0	.8	.9	.9	.9	1.0	1.3	.8
Below Av.	1.0	.5	1.1	.7	.7	.7	1.0	.7	.5	.8
Neglectees	1.8	.8	1.0	1.0	.5	.2	1.3	.7	.8	.5

GIRLS

Item No.	51	52	53	54	55	56	57	58	59	60
Stars	.4	1.5	.4	.6	1.5	2.0	.3	1.5	.8	1.5
Above Av.	.8	1.6	.5	1.1	1.3	1.3	.7	1.2	.7	1.2
Below Av.	.9	.7	.7	.9	.7	.7	.9	.8	.7	.7
Neglectees	1.3	.5	1.0	1.2	.2	.2	1.0	.4	.5	.6

TABLE XLIX (Continued)

BOYS

Item No.	61	62	63	64	65	66	67	68	69	70
Stars	2.0	1.8	1.0	1.7	1.4	1.7	1.4	2.5	2.5	1.7
Above Av.	1.0	.8	1.0	.9	1.2	.8	.9	1.0	1.2	.8
Below Av.	.7	.8	.9	.8	.7	.7	.7	.7	.8	.9
Neglectees	.5	.6	.8	.4	.8	.7	1.5	.4	1.2	1.0

GIRLS

Item No.	61	62	63	64	65	66	67	68	69	70
Stars	.8	1.3	.7	2.1	.5	2.0	.4	1.4	.3	1.8
Above Av.	1.2	1.2	.9	1.1	.9	1.5	.7	.9	.7	1.2
Below Av.	.7	.7	.9	.8	.9	.6	.9	.6	.6	.6
Neglectees	.4	.4	1.2	.2	1.0	.1	1.2	.5	.2	.2

TABLE XLIX (Continued)

BOYS

Item No.	71	72	73	74	75	76	77	78	79	80	81
Stars	1.5	.8	2.2	2.2	2.2	1.7	2.9	1.5	2.5	1.7	2.0
Above Av.	1.1	1.0	.7	.4	.6	.6	1.0	.9	.8	.6	1.0
Below Av.	.9	.8	.7	.2	.7	.9	.8	.8	.5	.8	.6
Neglectees	.2	1.5	.3	.2	.5	.4	.4	.5	.2	.7	.3

GIRLS

Item No.	71	72	73	74	75	76	77	78	79	80	81
Stars	2.0	.3	2.1	2.2	2.5	1.3	1.0	1.4	2.0	1.5	2.0
Above Av.	1.0	1.0	1.5	2.4	1.1	1.3	.9	1.1	1.8	1.0	1.2
Below Av.	.6	.9	.6	.6	.6	.6	.6	.7	.4	.7	.7
Neglectees	.4	.8	.3	.6	.5	.4	.2	.7	.4	.2	.3

TABLE L

"GUESS WHO? TEST FORM B" SHOWING AVERAGE NUMBER OF TIMES EACH ITEM WAS ATTRIBUTED
TO BOYS' SOCIOMETRIC CATEGORIES

STANDARDS TWO - FOUR BOYS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Stars	5.29	1.64	2.79	1.14	5.79	0.43	5.22	3.79	1.22	4.07	4.5	3.29	2.0	2.9	3.5	1.36	2.5	4.07	0.29
Above Av.	3.13	3.04	3.83	2.0	3.09	2.0	4.22	2.91	2.3	2.39	1.74	3.17	2.3	2.52	3.04	2.09	1.52	3.74	1.0
Below Av.	2.19	3.39	2.29	2.42	1.93	3.19	2.03	2.06	3.16	1.42	1.16	3.77	2.26	2.09	1.71	2.81	1.74	1.32	2.52
Neg. & Iso.	1.75	2.5	1.92	2.5	1.0	3.0	1.67	2.08	2.83	1.0	0.5	2.08	3.17	1.67	1.5	2.18	1.42	1.25	2.83

FORM I BOYS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Stars	6.21	1.07	4.21	1.21	4.36	0.93	5.72	3.72	0.93	1.5	3.29	3.07	0.14	1.43	4.07	1.5	1.79	6.29	0.14
Above Av.	3.89	1.63	3.22	1.59	2.95	1.48	3.23	2.80	0.96	1.28	1.89	2.57	0.72	1.85	2.26	1.26	1.19	3.67	0.76
Below Av.	1.84	2.41	2.56	2.06	1.89	1.76	1.22	1.60	1.29	1.13	0.56	1.65	1.49	1.22	1.16	1.78	1.29	1.25	2.11
Neg. & Iso.	1.15	4.31	2.01	4.23	0.92	4.52	1.31	1.31	2.23	0.85	0.31	2.62	1.54	1.54	1.08	2.01	1.46	0.39	4.15

TABLE LI

"GUESS WHO? TEST FORM B" SHOWING AVERAGE NUMBER OF TIMES EACH ITEM WAS ATTRIBUTED
TO GIRLS' SOCIOMETRIC CATEGORIES

STANDARDS TWO - FOUR GIRLS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Stars	8.75	9.75	1.5	6.75	0.75	9.0	0	5.63	7.0	0.75	6.75	1.13	7.63	3.75	5.63	0.5	4.63	5.13	0.5
Above Av.	4.93	4.43	2.67	5.17	1.77	4.57	0.9	3.17	4.77	2.33	3.6	1.4	3.9	2.87	3.13	0.87	2.67	3.37	1.77
Below Av.	2.56	2.04	4.0	2.85	2.46	2.42	1.81	1.96	2.19	1.92	1.73	1.62	1.88	1.62	1.62	1.85	1.54	1.27	2.38
Neg. & Iso.	1.6	2.1	5.4	1.7	3.6	1.1	1.3	1.6	2.0	1.6	1.3	1.8	0.3	2.0	1.9	0.3	2.2	0.6	5.1

FORM I GIRLS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Stars	8.0	7.0	1.67	7.17	1.67	7.67	0.67	4.33	7.17	0.5	7.33	0.83	9.17	3.67	6.33	0.5	5.33	4.83	0.5
Above Av.	3.87	3.62	1.83	3.70	1.98	4.65	1.57	2.46	3.59	1.03	3.84	1.25	3.54	1.87	2.02	1.52	2.06	3.25	1.22
Below Av.	3.12	2.98	4.12	2.63	2.51	2.34	2.0	2.46	2.56	1.87	2.10	1.98	1.76	2.41	2.09	2.24	2.51	1.51	3.49
Neg. & Iso.	1.78	1.89	3.89	1.22	1.89	0.67	1.44	2.33	1.11	1.56	1.22	1.56	0.11	1.44	1.33	1.22	1.67	0.44	3.67

APPENDIX F

ATTITUDE TOWARDS SCHOOL SCALE

The Study of Attitude Towards School scale which was used was devised by A.B. Fitt, Emeritus Professor of Education, University of Auckland. Following a technique developed by Thurstone and Chave the scale was applied to a total of 1244 Auckland children.

A test scale of thirty items was arrived at from fifty-five statements expressing different degrees of liking or disliking for school selected by judges' opinions, checked for ambiguity and securing a fairly even spread through the whole range of opinion. The scale values of the different statements are shown in parenthesis.

A STUDY OF ATTITUDE TOWARDS SCHOOL

- (0) 1. I like school better than anything else.
- (1.8) 2. I feel happy at school.
- (10.3) 3. If I had my way I would never go to school.
- (0.9) 4. I like everything about school.
- (5.1) 5. I like some things about school but do not like others.
- (10.5) 6. I hate school more than anything else.
- (6.4) 7. I suppose school is all right but I don't care much for it.
- (7.4) 8. We have to work too hard at school.

- (2.2) 9. We are lucky to have schools to go to.
- (9.2) 10. School is a waste of time.
- (8.7) 11. I would sooner work at home or somewhere else than
at school.
- (4.6) 12. I like the games we have at school.
- (7.9) 13. I am glad when school is over.
- (6.7) 14. In school we learn a lot of things which are of no
use.
- (3.7) 15. I like school because it keeps us out of mischief.
- (5.8) 16. My father and mother went to school, so I suppose
it is all right for me.
- (0.6) 17. I like school so much that I do not mind getting
very tired there.
- (1.3) 18. I do not want to leave school.
- (8.6) 19. It is a pity we have to go to school.
- (1.7) 20. I enjoy every minute of school but am glad when
the holidays come.
- (2.9) 21. I like to hear people saying nice things about
school.
- (7.1) 22. I do not care about school work but I would not
like all boys and girls to be like me.
- (9.6) 23. I think life would be better if all the schools
were closed.

- (3.6) 24. I like school when I am there, but I like the holidays better.
- (4.7) 25. I like school just a little.
- (2.6) 26. I like to go to school because I learn many new things there.
- (8.1) 27. There is too much work at school.
- (9.6) 28. I shall leave school as soon as I am allowed to.
- (6.3) 29. We do not have enough play at school.
- (5.3) 30. Sometimes I think going to school is good and sometimes I think it is useless.

The scale values range from 0, corresponding to extreme liking, to 10.5, corresponding to extreme disliking. The distribution of statements through the range of values was fairly regular.